

Environmental Assessment and Nationwide Programmatic Section 4(f) Evaluation

Yellowstone River – NE of Livingston

January 2008

BR 11-1(44)56 Control Number 4790



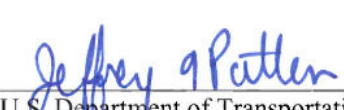
Environmental Assessment
and
Nationwide Programmatic Section 4(f) Evaluation
for
BR 11-1(44)56
YELLOWSTONE RIVER – NE OF LIVINGSTON
(P.M.S. Control No. 4790)
in
Park County, Montana

This document is prepared in conformance with the Montana Environmental Policy Act (MEPA, 75-1-201 MCA) requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with the National Environmental Policy Act (NEPA) requirements for an Environmental Assessment under 23 CFR 771.119, and Section 4(f) of the United States Department of Transportation Act under 23 CFR 771.135.

Submitted pursuant to **42 USC 4332(2)(c), 49 USC 303,**
Sections 75-1-201 & 2-3-104, MCA and Executive Orders 11990, 11988, and 12898
by the
United States Department of Transportation, Federal Highway Administration
and the
Montana Department of Transportation
Cooperating Agencies:
United States Army Corps of Engineers
Montana Fish, Wildlife and Parks
Montana Department of Natural Resources and Conservation
Park County
City of Livingston

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ABSTRACT: The proposed action is to replace the Yellowstone River Bridge and to reconstruct the corresponding roadway approaches, including the US 89/Bennett Street intersection in the City of Livingston in Park County, Montana. The purpose of the proposed action is to improve the safety of the Yellowstone River Bridge.

Comments on this draft environmental assessment are due by March 3, 2008 and should be sent to Tom Martin, Montana Department of Transportation, at the address above or submitted via e-mail at http://www.mdt.mt.gov/pubinvolve/eis_ea.shtml.

TABLE OF CONTENTS

1.0	PURPOSE AND NEED	1-1
1.1	Project Background/Description	1-1
1.1.1	Project Location	1-1
1.1.2	Project Description.....	1-4
1.1.3	Project History.....	1-5
1.1.4	Project Funding and Schedule.....	1-6
1.2	Purpose for the Proposed Action.....	1-6
1.3	Need for the Proposed Action	1-6
1.3.1	Need to Improve Safety	1-6
1.3.2	Need to Improve Roadway Deficiencies	1-6
1.3.3	Need to Accommodate Alternative Modes of Transportation.....	1-7
2.0	ALTERNATIVES	2-1
2.1	Development of Alternatives.....	2-1
2.1.1	Design Criteria	2-1
2.2	Alternatives	2-2
2.2.1	No-Build Alternative	2-2
2.2.2	Build Alternatives	2-3
2.3	Selection of the Preferred Alternative	2-10
2.4	Alternatives Considered but Eliminated.....	2-10
3.0	IMPACTS.....	3-1
3.1	Topic Areas with No Impacts.....	3-2
3.1.1	Parks and Recreation/NL&WCF – Section 6(f).....	3-2
3.1.2	Wild and Scenic Rivers	3-2
3.1.3	Air Quality	3-2
3.1.4	Noise	3-3
3.1.5	Environmental Justice – Executive Order 12898/Title VI.....	3-3
3.2	Effects on the Transportation System	3-3
3.2.1	Access and Traffic.....	3-4
3.2.2	Safety.....	3-7
3.2.3	Pedestrians and Bicycles	3-8
3.2.4	Parking.....	3-10
3.3	Effects on the Community.....	3-10
3.3.1	Community Resources.....	3-11
3.3.2	Local and Regional Economics	3-13
3.3.3	Land Use and Local Plans.....	3-14
3.3.4	Right-of-Way and Relocations	3-15
3.3.5	Utilities.....	3-16
3.3.6	Contaminated Sites/Hazardous Materials	3-17
3.3.7	Cultural/Archaeological/Historical Resources	3-19
3.3.8	Farmland	3-22
3.3.9	Visual Resources and Aesthetics.....	3-23

3.3.10	Energy.....	3-25
3.4	Effects on the Natural and Physical Environment.....	3-26
3.4.1	Floodplains – Executive Order 11988.....	3-26
3.4.2	Water Resources/Quality.....	3-27
3.4.3	Water Body Modifications.....	3-29
3.4.4	Wetlands and Other Waters of the U.S. – Executive Order 11990.....	3-31
3.4.5	Vegetation.....	3-34
3.4.6	Wildlife and Migratory Birds.....	3-35
3.4.7	Aquatic Species.....	3-38
3.4.8	Threatened and Endangered Species.....	3-40
3.4.9	Section 4(f) Resources.....	3-40
3.5	Construction Impacts.....	3-41
3.5.1	No-Build Alternative.....	3-41
3.5.2	Build Alternatives.....	3-42
3.6	Cumulative Impacts.....	3-51
4.0	PERMITS AND AUTHORIZATIONS REQUIRED.....	4-1
5.0	COMMENTS AND COORDINATION.....	5-1
5.1	Agency Consultation.....	5-1
5.2	Cooperating Agencies.....	5-1
5.3	Public Involvement.....	5-1
5.4	Opportunities for Comments.....	5-2
6.0	LIST OF PREPARERS.....	6-1
6.1	Preparers.....	6-1
6.2	Reviewers.....	6-1
7.0	DISTRIBUTION LIST.....	7-1
7.1	Federal Agencies.....	7-1
7.2	State Agencies.....	7-1
7.3	Local Agencies.....	7-2
7.4	Other Organizations.....	7-2
8.0	LIST OF SOURCES/DOCUMENTS.....	8-1

LIST OF APPENDICES

Appendix A	Environmental Overview Map
Appendix B	Farmland Conversion Impact Rating
Appendix C	Cultural Resources
Appendix D	Noise
Appendix E	Programmatic 4(f) Evaluation
Appendix F	Agency Coordination
Appendix G	Public Involvement Materials

LIST OF FIGURES

Figure 1.1	Project Location Map	1-2
Figure 1.2	Proposed Project Area	1-3
Figure 1.3	Existing Yellowstone River Bridge	1-3
Figure 1.4	Existing Bridge Elements	1-4
Figure 1.5	Existing Bennett Street Intersection	1-5
Figure 2.1	No-Build Alternative: Bridge Typical Section	2-3
Figure 2.2	No-Build Alternative: Roadway Typical Section (bridge approaches)	2-3
Figure 2.3	Alternatives 1 and 2: Bridge Typical Section	2-4
Figure 2.4	Alternative 1: Bridge Alignment	2-4
Figure 2.5	Alternative 1: Bridge Superstructure and Piers with Hammerhead Pier Cap	2-5
Figure 2.6	Alternative 1: Bridge Superstructure and Piers with Integral Pier Cap	2-5
Figure 2.7	Alternatives 1 and 2: Bridge Railing Examples	2-6
Figure 2.8	Alternatives 1 and 2: Multi-use Path Configuration Underneath the Bridge	2-6
Figure 2.9	Alternative 1: US 89 and Bennett Street Intersection	2-7
Figure 2.10	Alternative 2: Bridge Alignment	2-8
Figure 2.11	Alternative 2: Bridge Superstructure and Piers	2-9
Figure 3.1	City of Livingston – Access to Interstate 90	3-4

LIST OF TABLES

Table 3.1	Average Daily Traffic Volume	3-5
Table 3.2	Crash Summary by Location (January 1, 1993 – December 31, 2002)	3-7
Table 3.3	Accident and Severity Rates (January 1, 1996 – December 31, 2005)	3-8
Table 3.4	School Bus Traffic on Livingston Bridge	3-11
Table 3.5	Cultural Inventory of NRHP-Eligible Sites in Project Area	3-20
Table 3.6	Cultural Resource Impacts by Alternative	3-21
Table 3.7	Potential Jurisdictional Wetland Impacts by Alternative	3-33

Conversion Factors	
Metric	English
1 meter	3.281 feet
1 meter ²	10.764 feet ² or 1.195 yard ²
1 kilometer	0.621 miles
1 hectare	2.471 acres
1 hectare = 10,000 meters	
1 kilogram	2.205 pounds
English	Metric
1 foot	0.305 meters
1 foot ²	0.093 meter ²
1 mile	1.609 kilometers
1 acre = 43,560 feet	0.405 hectares
1 pound	0.454 kg

The English measurements in this document are approximate and are always shown within parentheses.

LIST OF ACRONYMS AND ABBREVIATIONS

+/-	approximately
ADT	average daily traffic
AASHTO	American Association of State Highway and Transportation Officials
ac	acre
ACM	asbestos containing material
AICP	American Institute of Certified Planners
APE	area of potential effect
BGEPA	Bald and Golden Eagle Protection Act
BLM	US Bureau of Land Management
BNLSC	Burlington Northern Livingston Shop Complex
BMP	best management practice
BRR	Biological Resources Report
CECRA	Comprehensive Environmental Cleanup and Responsibility Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
cl	center line
cm	centimeter
CO	carbon monoxide
COE	US Army Corps of Engineers
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibels

dbh	diameter at breast height
EA	environmental assessment
EIS	environmental impact statement
EO	Executive Order
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHPM	Federal-Aid Highway Program Manual
FHWA	US Department of Transportation – Federal Highway Administration
FIRM	Flood Insurance Rate Map
FONSI	finding of no significant impact
FPPA	Farmland Protection Policy Act
FR	Federal Register
ft	foot
GIS	Geographic Information Systems
GWIC	Ground Water Information Center
ha	hectare
ISA	initial site assessment
km	kilometers
km/h	kilometers per hour
Leq(h)	dBA equivalent noise level
LOS	level of service
LUST	leaking underground storage tank
LWCF	Land and Water Conservation Fund
m	meters
MBTA	Migratory Bird Treaty Act
MCA	Montana Code Annotated
MDA	Montana Department of Agriculture
MDEQ	Montana Department of Environmental Quality
MDNRC	Montana Department of Natural Resources and Conservation
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MFWP	Montana Fish, Wildlife and Parks
mi	miles
MP	milepost
MPDES	Montana Pollutant Discharge Elimination System
mph	miles per hour
MRL	Montana Rail Link
MSAT	Mobile Source Air Toxic
MT	Montana
MTNHP	Montana Natural Heritage Program

MUTCD	Manual on Uniform Traffic Control Devices
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NACO	National Association of Counties
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHS	National Highway System
NPS	National Park Service
NRCS	US Department of Agriculture – Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
PCP	pentachlorophenol
PE	Professional Engineer
PL	Public Law
PSI	Preliminary Site Assessment
RACM	regulated asbestos containing material
RCRA	Resource Conservation and Recovery Act
ROW	right-of-way
RP	reference mile post
SHPO	Montana State Historic Preservation Office
SPA	Stream Protection Act
STIP	Statewide Transportation Improvement Plan
SWLF	Solid Waste Landfill
SWPPP	Stormwater Pollution Prevention Plan
TIS	Transportation Impact Study
TMDL	total maximum daily load
TNM	Traffic Noise Model
TSD	treatment, storage, or disposal
USC	US Code
USDA	US Department of Agriculture
USFWS	US Fish and Wildlife Service
USFS	US Forest Service
USGS	US Geological Survey
UST	underground storage tank
VOC	volatile organic compound
VMT	vehicle miles traveled

SUMMARY

INTRODUCTION

The Montana Department of Transportation (MDT) proposes to replace a bridge over the Yellowstone River and its roadway approaches in south central Montana in Park County on State Primary Route 11/US 89 (US 89) at mile post (MP) 55.94. MDT initiated the bridge replacement project in 2002. The existing bridge was built in 1934 and is narrow.

The proposed bridge would be slightly higher than the existing bridge. As a result, the reconstruction of the bridge approaches would extend out from the bridge until the existing grade was met. On the western approach, this would require reconstruction through the Bennett Street intersection. As part of the reconstruction, the US 89 and Bennett Street intersection would be improved to a T-configured intersection and a left-turn lane on US 89 at Bennett Street would be implemented.

PURPOSE AND NEED

The purpose of the proposed action is to improve the safety of the Yellowstone River Bridge in a manner that is affordable, that recognizes public concerns, and that complies with all applicable standards. Improvements are proposed to address safety concerns through the year 2030. The project needs include:

- Need to improve safety
- Need to improve roadway deficiencies
- Need to accommodate alternative modes of transportation

ALTERNATIVES

No-Build Alternative

Under the No-Build Alternative, the characteristics of the bridge and approaches to the bridge, including the US 89/Bennett Street intersection, as they are today, would continue. There would be no improvements to the narrow Yellowstone River Bridge or roadway approaches to the bridge. The US 89 and Bennett Street intersection would remain in its current location and configuration. Routine maintenance would be provided.

Build Alternative

Two Build Alternatives were evaluated.

Alternative 1

Alternative 1 would include one 3.6-m (12-ft) wide travel lane in each direction and 2.4-m (8-ft) wide shoulders with a 3-m (10-ft) multi-use path along the south side of the bridge deck. The proposed bridge would be a four-span, steel girder structure longer than the existing highway bridge. The proposed alignment would be offset downstream of the existing bridge (north toward the existing railroad bridge). Three single shaft piers (non-skewed) would be used in the substructure of the bridge. The pier cap design for Alternative 1 could be either an ordinary hammerhead or an integral pier cap (See Figures 2.5 and 2.6). The specific bridge elements would be determined during final design.

A 3-m (10-ft) wide multi-use path, separated from travel lanes and shoulder area by a traffic railing, would be included on the south side of the bridge deck. The longer bridge length would accommodate the future construction of 3-m (10-ft) wide multi-use paths below the bridge on either side of the river between the river channel and the bridge abutment. However, MDT is not proposing to build the multi-use paths underneath the bridge as part of this project.

The roadway approaches would include one 3.6-m (12-ft) travel lane in each direction. Other elements would vary based on site conditions. The roadway approaches would include the extension of the 3-m (10-ft) multi-use pathway, which would end as the approaches transition to the existing roadway. If the parking areas discussed below are constructed, the multi-use path would connect to them. The US 89 and Bennett Street intersection, on the west approach to the bridge, would be reconstructed due to the change in the vertical grade of the roadway approach. Because the reconstructed roadway approaches would require changes to this intersection, MDT proposes to reconfigure the existing Y-configuration to a T-configuration to improve safety at this location. The reconfigured intersection would include a left turn lane on US 89 for eastbound traffic turning onto Bennett Street. Between US 89 and the MRL tracks, Bennett Street would have one travel lane in each direction. The southbound lane would also have a left turn lane and a right turn lane for access to US 89. All of the proposed lanes on US 89 and Bennett Street would be 3.6 m (12 ft) wide. Shoulders on US 89 would be 2.4 m (8 ft) wide and the shoulders on Bennett Street would be 0.6 m (2 ft) wide. There would be no changes to the railroad crossing at Bennett Street or the roadway north of the railroad tracks.

The single shaft pier configuration for Alternative 1 would not allow MDT to construct the bridge in phases. As a result, traffic would be detoured during construction of the new bridge. To gain access west of the bridge, traffic would travel west on I-90 to Exit 333 at Park Avenue. Eastbound traffic from Livingston would access I-90 from Exit 333 and travel east on I-90 to Exit 337. The total detour length would be 14.5 km (9 mi).

Construction is anticipated to last approximately 15 months, with the bridge closed to traffic for approximately 10 months.

Alternative 2

Alternative 2 is similar to Alternative 1 except for the following differences in the proposed bridge design.

Alternative 2 would include three double shaft piers on an approximate 30-degree skew. Each pier structure would be arranged parallel to the river flow. Parallel flanged girders would be incorporated in the design and the pier caps would be ordinary hammerhead pier caps (see Figure 2.11).

The proposed double shaft piers would facilitate phased construction, so Alternative 2 would not require a traffic detour. The overall construction period of the bridge would be longer, however. Construction is estimated to take approximately 27 months.

Potential Enhancements

If funding and right-of-way (ROW) are available, MDT will consider constructing gravel parking lots on each side of the bridge in the project area. The multi-use path proposed under both Build Alternatives would be connected to these parking areas if they are constructed.

SUMMARY OF ENVIRONMENTAL IMPACTS

Table S.1 provides a summary of environmental impacts and mitigation measures for the No-Build Alternative, Alternative 1, and Alternative 2. Construction impacts are listed at the end of the table. Resources that are not present in the corridor or would not be affected by the Build Alternatives are not listed in Table S.1. These include:

- Parks and Recreation/Land and Water Conservation Fund Act Section 6(f) Facilities
- Wild and Scenic Rivers
- Air Quality
- Noise
- Environmental Justice

CONCLUSION

The Build Alternatives meet the project purpose and needs by improving the safety of the Yellowstone River Bridge. Both Build Alternatives improve safety for vehicles as well as pedestrians, bicyclists, and river users. Based on an evaluation of the alternatives, MDT and the Federal Highway Administration (FHWA) have identified Alternative 1 as the Preferred Alternative.

The bridge design in Alternative 1 would provide better hydraulic performance long-term than the bridge design in Alternative 2. The single shaft pier proposed under Alternative 1 would perform better over time because of the dynamic nature of the river in this location. The double shaft pier configuration proposed under Alternative 2 would be more susceptible to pier scour and debris and ice accumulation as the river approach angle shifts over time or during flooding events.

Alternative 1 would also better serve the safety of boaters long-term. Both alternatives would have one less bridge pier in the river for floaters to maneuver around; however, the single shaft pier design would minimize debris accumulation over time as the approach angle of the river changes. Therefore, Alternative 1 would provide the least impediment to floaters in the long-term.

The shorter construction duration of Alternative 1 as compared with Alternative 2 would have two primary benefits. The segment of the river running through the project area is recommended for closure during construction. If this closure occurs, recreational river users and river outfitters that utilize this segment of the river would lose access for less time than under Alternative 2. Also, the temporary construction-related impacts to wildlife, aquatic resources, and the river itself would be lessened with the shorter construction duration of Alternative 1.

Alternative 1 would require closure of the bridge to vehicular traffic for approximately ten months of the approximately 15-month construction duration, which results in detouring traffic to I-90. The bridge would remain open to traffic during construction under Alternative 2. However, construction-related traffic delays and disruption would still occur under Alternative 2 and the duration would be approximately 27 months as compared with approximately 15 months under Alternative 1. Also, because traffic would be detoured for ten of the 15-month construction duration under Alternative 1, safety concerns related to moving traffic through the bridge construction zone would only be an issue for approximately five months. Under Alternative 2, these safety concerns would exist for the entire construction duration – approximately 27 months.

The construction costs for Alternative 1 are estimated at 9.8 million dollars (estimated August 2006). The construction costs for Alternative 2 are estimated to be between 10 and 20 percent higher due to the phased construction.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Access and Traffic				
Local Access	No impact.	Potential for reconfiguration of shared access to Rainbow Motel and KPRK Radio Station. Two new accesses added if proposed parking areas are implemented.	Same impacts as Alternative 1.	None required.
US 89/Bennett Street Intersection	Traffic flow would continue to be impacted. Traffic queues would continue to form on US 89 and Bennett Street while waiting for trains to clear.	Improved traffic flow with T-intersection and left turn lane on US 89 at Bennett Street.	Same impacts as Alternative 1.	None required.
Traffic Flow	Traffic flow impacted by narrow bridge, especially when trucks are diverted from I-90 due to closures.	Improved traffic flow with wider bridge.	Same impacts as Alternative 1.	None required.
Safety				
Yellowstone River Bridge	Current high accident and severity rates would continue.	Anticipated reduction in sideswipe-opposite direction crashes with wider bridge.	Same impacts as Alternative 1.	None required.
US 89/Bennett Street Intersection	Current high accident and severity rates would continue.	Anticipated reduction in rear-end crashes with T-intersection at US 89 and Bennett Street. Improved safety due to increased sight distance to bridge.	Same impacts as Alternative 1.	None required.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Pedestrians and Bicycles				
Safety and Access	Safety concerns related to pedestrian and bicycle use of bridge and roadway approaches would remain.	Improved pedestrian/bicycle safety and access with new barrier-separated 3-m (10-ft) wide multi-use path on south side of bridge.	Same impacts as Alternative 1.	None required.
Pedestrian and Bicycle Plans	The pedestrian elements of the <i>Urban Design Framework Master Plan</i> or the Livingston/Park County Trails Plan would not be met.	A multi-use path across the bridge and accommodation of multi-use paths under the bridge would be consistent with the <i>Urban Design Framework Master Plan</i> and Livingston/Park County Trails Plan.	Same impacts as Alternative 1.	None required.
Parking				
Parking Capacity	Vehicles would continue to encroach on US 89 when parking areas are full.	Potential to increase parking capacity by providing formal designated gravel parking areas. The provision of parking areas is dependant on the availability of ROW and funding.	Same impacts as Alternative 1.	None required.
Community Resources				
Access to Community Facilities and Recreation Areas	No impact.	Improved recreational access with new multi-use path across the bridge and space for future multi-use paths underneath the bridge.	Same impacts as Alternative 1.	None required.
Emergency Services	Difficult for emergency vehicles to pass due to lack of shoulder width.	Adding shoulder width allows emergency vehicles to pass and may improve emergency response times.	Same impacts as Alternative 1.	None required.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Community Resources (cont.)				
Boater Safety	Safety issues for boaters would remain.	Minor improvements to boater safety due to the potential for increased vertical clearance and fewer bridge piers. Single shaft piers would maintain boater safety over time as channel migration occurs.	Similar to Alternative 1, except that double shaft piers would not improve conditions for boaters as much as the single shaft piers in Alternative 1 due to channel migration over time.	None required.
Local and Regional Economics				
Local Businesses	No impact.	Access to businesses in the corridor would be improved with better traffic flow.	Same impacts as Alternative 1.	None required.
Regional Economics	No impact.	River outfitters may benefit from improved safety.	Same impacts as Alternative 1, although river safety improvements would not be as great as under Alternative 1.	None required.
Project Construction Cost	None	9.8 million (estimated August 2006)	10 to 20 percent higher than Alternative 1.	None required.
Land Use and Local Plans				
Land Use	No impact.	Land use changes would be from roadway-adjacent agricultural and vacant land to transportation or recreation.	Same impacts as Alternative 1.	None required.
Local Plans	The recommendations of local plans would not be implemented.	Consistent with <i>Urban Design Framework Master Plan</i> and the <i>Livingston/Park County Trails Plan</i> .	Same impacts as Alternative 1.	None required.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Right-of-Way (ROW) and Relocations				
MRL Easement	No impact.	A new easement may be required.	Same impacts as Alternative 1.	Acquisition of land, and improvements, for highway construction is governed by state and federal laws and regulations that are designed to protect both the landowners and the taxpaying public. Landowners affected are entitled to receive just compensation for any land or improvements acquired and for any depreciation in value of the remaining land due to the effects of highway construction pursuant to Montana law. Acquisition will be accomplished in accordance with applicable laws; specifically, Title 60, Chapter 4 and Title 70, Chapter 30, Mont. Code Ann.; and Title 42, U.S.C., Chapter 61, “Uniform Relocation Assistance And Real Property Acquisition Policies For Federal And Federally Assisted Programs.”
Right-of-Way	No impact.	Approximately 0.3 ha (0.6 ac)	Same impacts as Alternative 1.	
Utilities				
Utilities	No impact.	Could accommodate water and sewer lines across the bridge as per the City’s request. If the City would like to extend utilities across the bridge, they will need to submit a MDT Structure Encroachment Permit to MDT.	Same impacts as Alternative 1.	In accordance with MDT Standard Specifications, utility companies will be contacted, if necessary, to coordinate activities to avoid or minimize disruption of service.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Contaminated Sites/Hazardous Materials				
VOC Ground Water Plume	No impact.	It is not anticipated that the proposed project would affect the concentration of VOCs or the flow of the plume.	Same impacts as Alternative 1.	<p>In accordance with MDT Standard Specifications, if contaminated soils or hazardous materials are encountered, excavation and disposal will be handled in compliance with applicable federal, state, and local regulations.</p> <p>Because the VOC ground water plume extends throughout the project area, additional subsurface sampling and analyses of soils may be warranted to more precisely determine the extent and scale of contamination. In May 2007, MDT and MDEQ reached agreement on a geotechnical drilling and waste management work plan to be implemented for this project.</p>
Cultural/Archaeological/Historical Resources				
NRHP-Listed	No effect.	No Effect on the KPRK Radio Station.	Same impacts as Alternative 1.	None required.
NRHP-Eligible Sites	No effect.	<p>No Effect on Northern Pacific Railroad Grade and Bridge.</p> <p>No Adverse Effect on the Rainbow Motel.</p> <p>Adverse Effect on the Yellowstone River Highway Bridge.</p>	Same impacts as Alternative 1.	Programmatic Agreement mitigation for Historic Roads and Bridges will apply.
Farmland				
Direct Impacts to Farmland of Local Importance	No impact.	Approximately 0.2 ha (0.4 ac).	Same impacts as Alternative 1.	None required.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Visual Resources and Aesthetics				
Visual Quality	No impact.	Approximately 20 to 25 percent of the trees in the project area with a diameter at breast height (dbh) of 150 cm (6 in) or larger, including mature cottonwoods, could be removed as a result of the widening of the roadway approaches, reconstruction of the Bennett Street intersection, and the potential provision of parking areas. Views from the river would be similar to existing condition.	Same impacts as Alternative 1.	Impacts to trees in the project area will be minimized wherever practicable during final design.
Bridge Aesthetics	No impact.	Improved aesthetics through context sensitive design and crest vertical curve. It may be possible to use haunched girders on this alternative, which would give the bridge a more slender appearance.	Same impacts as Alternative 1, except that this alternative would not have the possibility of using haunched girders.	None required.
Energy				
Energy	No impact.	May have a minor benefit because of improved traffic flow.	Same impacts as Alternative 1.	None required.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Floodplains/Executive Order 11988				
Transverse Encroachment of Floodplain	The transverse encroachment of US 89 would continue.	Transverse encroachment would continue but would not increase.	Same impacts as Alternative 1.	All practical alternatives to minimize harm to floodplains will be incorporated in the build alternatives including the use of slope stabilization structures. Impacts to the floodplain will be minimized by following standard stream crossing design criteria, avoiding direct impacts on stream channels whenever practicable. To minimize impacts, design of this project will be in compliance with Federal-Aid Highway Program Manual (FHPM) 6-7-3-2 “Location and Hydraulic Design of Encroachments on Flood Plains” (also referenced as 23 CFR 650 A) and Executive Order 11988, Floodplain Management. Floodplain Development Permit will be obtained from Park County Floodplain Administrator.
Hydraulic Performance	The hydraulic performance of the existing bridge would continue.	Would optimize hydraulic performance and minimize scour with a wider hydraulic opening and single shaft piers.	The double shaft piers could be more susceptible to debris and ice accumulation and could have more pier scour depending on the angle of attack during a flood event.	
Backwater	There would be no reduction of backwater.	The proposed bridge was sized independently of the railroad structure to optimize the reduction in backwater. However, backwater improvements would be very minimal until the railroad structure is replaced with a longer structure.	Same impacts as Alternative 1.	
Water Resources/Quality				
Water Resources	No impact.	One ground water well is present in the study area and could be impacted by Alternative 1. Other ground water wells could be impacted if discovered during final design or construction.	Same impacts as Alternative 1.	If avoidance is not possible, impacted wells will be relocated in accordance with FHWA’s and MDT’s standard procedures.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Water Resources/Quality (cont.)				
Water Quality	No impact.	<p>Probable cause of existing water quality impairment is habitat alteration, and additional vegetation (habitat) would be removed due to bridge replacement.</p> <p>Increased impervious surfaces could affect water quality.</p>	Same impacts as Alternative 1.	<p>The Build Alternatives will be in compliance with conditions of the water quality regulations, which are intended to minimize impacts to water bodies. Specific mitigation measures would include:</p> <ul style="list-style-type: none"> • Adherence to MDT BMPs. • An erosion control and sediment plan prepared in compliance with the Montana Pollutant Discharge Elimination System (MPDES) regulations. • Adherence to conditions specified in the Montana Stream Protection Act (SPA 124). • Adherence to the US Army Corps of Engineers (COE) 404 Permit conditions.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Water Body Modifications				
Yellowstone River	No impact.	Number of bridge piers would be reduced from 4 to 3 and the bridge design would provide optimal hydraulic performance.	Number of bridge piers would be reduced from 4 to 3 and the bridge design would improve hydraulic performance compared to the existing condition. However, compared to the Alternative 1 single shaft piers, this alternative's double shaft piers would not perform as well hydraulically and could collect debris as the river approach angle changes over time.	All work will be performed in accordance with state and federal guidelines regarding water quality and permit conditions. These include the applicable regulations under the Federal Clean Water Act of 1977 (i.e. 404 Permit and Section 402/MPDES permit) and specific requirements from the Montana SPA 124, Montana 318 Authorization, Federal Rivers and Harbors Act (Section 10 Permit), Montana Land-use License, and any other laws or regulations that may apply to the project. MDT will incorporate a Stormwater Pollution Prevention Plan (SWPPP) and BMPs in the proposed construction project. The bridge will be designed to minimize permanent alterations of the river banks.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Wetlands and Other Waters of the U.S./Executive Order 11990				
Impacts to Jurisdictional Wetlands	No impact.	Approximately 0.3 ha (0.8 ac).	Same impacts as Alternative 1.	<p>Impacts to specific wetlands in the project area would be unavoidable due to the existing alignment of the highway (bridge), the locations of the wetlands, and the design considerations. MDT's standard practice in regard to jurisdictional wetland impacts is to:</p> <ol style="list-style-type: none"> 1) Avoid potential adverse impacts to the maximum extent practicable. 2) Minimize unavoidable adverse impacts to the extent appropriate and practicable. 3) Compensate for unavoidable adverse impacts that remain after all appropriate and practicable minimization has occurred. <p>Estimated wetland impacts included in this EA are based on conceptual design and are subject to COE review. Adverse wetlands impacts have been avoided and minimized as much as practicable and as much as can be determined in the conceptual design phase.</p> <p>Avoidance and minimization measures to date include steepening fill slopes where practicable and where safety would not be compromised. Avoidance and minimization measures will continue to be employed where practicable throughout design and construction. Mitigation for unavoidable adverse impacts to jurisdictional wetlands will be coordinated with the COE and other resource agencies as required for permitting.</p> <p>continued on next page...</p>

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Wetlands and Other Waters of the U.S./Executive Order 11990 (cont.)				
				The wetland replacement ratio and wetland mitigation sites will be identified in consultation with the COE during permitting. Limited possibilities for on-site mitigation exist within the project area due to existing development, private land ownership, and adjacent railroad right-of-way. Off-site mitigation will likely be required for the impact that may occur. This will be assessed during the permitting process with the COE. If required, off-site mitigation will come from a reserve within watershed 13 – Upper Yellowstone.
Vegetation				
Vegetation	No impact.	Approximately 2.8 ha (6.9 ac) of mixed habitats and approximately 0.1 ha (0.3 ac) of riparian vegetation would be impacted. Removal of approximately 20 to 25 percent of the trees in the project area with a diameter at breast height of 150 cm (6 in) or larger, including mature cottonwood trees, could be required.	Same impacts as Alternative 1.	In accordance with MDT Standard Specifications, clearing and grubbing will be limited to the area necessary for construction of the project. See mitigation for Visual Resources regarding removal of cottonwood trees. Mitigation for noxious weeds is described in Construction Impacts.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Wildlife and Migratory Birds				
Montana Species of Special Concern	No impact.	No impacts to long-billed curlew. The alternative is not likely to adversely impact bald eagles.	Same impacts as Alternative 1.	No adverse impacts to long-billed curlew would occur; therefore, no mitigation is required. Closer to the start of construction, a biologist will verify that there are no bald eagle nests within one mile of the project area. If nests are found, MDT would consult with MFWP prior to the start of construction activities. The removal of riparian habitat will be minimized as practicable.
Urban and Rural Wildlife	No impact.	Minor potential impacts to wildlife and habitat, but unlikely to contribute to trends towards federal listing or loss of viability of any wildlife species.	Same impacts as Alternative 1.	Removal of wildlife habitat would be minimized or avoided to the extent practicable. The opportunity to enhance wildlife movement at the new bridge will be addressed by the longer structure which will provide more space underneath the bridge.
Migratory Birds	No impact.	Potential disturbance to migratory birds during bridge removal if nests are present at that time.	Same impacts as Alternative 1.	The bridge will be rechecked for nesting activity closer to the start of construction. If nests are identified and the bridge is to be removed during the migratory bird nesting period, inactive nests will be removed prior to the nesting period and efforts will be undertaken to ensure that new nests are not established prior to removal of the old structure. If active nests are re-established or exist on the structure on or between May 1 and August 15 (the nesting period), the structure or nests will not be removed until the MDT project manager, in coordination with MDT Environmental Services, provides approval.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Aquatic Species				
Aquatic Species	No impact.	Minor potential impacts to aquatic species in Yellowstone River, including the Yellowstone cutthroat trout, from loss of riparian vegetation and increased stormwater runoff (contaminants and increased water temperature).	Same impacts as Alternative 1.	<p>Project design will minimize fisheries impacts wherever practicable and will incorporate a SWPPP and BMPs.</p> <p>Sediment control during and following construction will be implemented. Measures to prevent sediment loading into the Yellowstone River may be needed should soil and debris run-off occur from construction equipment and from exposed, disturbed areas adjacent to the river during construction.</p> <p>Adhere to conditions of CWA 404 Permit and recommendation of SPA 124.</p>
Threatened and Endangered Species				
Threatened and Endangered Species	No impact.	No threatened or endangered species are present in the project vicinity. Therefore, no impacts to threatened and endangered species would result.	Same impacts as Alternative 1.	No adverse impacts to threatened or endangered species would occur; therefore, no mitigation is required.
Section 4(f) Resources				
Section 4(f) Resources	No impact.	<p>Yellowstone River Highway Bridge: Section 4(f) use.</p> <p>KPRK Radio Station, Railroad Grade and Bridge, and Rainbow Motel: No section 4(f) use.</p>	Same impacts as Alternative 1.	Mitigation measures are described in the Nationwide Programmatic Section 4(f) Evaluation for the Yellowstone River Highway Bridge (Appendix E).

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Construction Impacts				
Interstate Closures in Winter	No impact.	Existing detour route may be closed and would require a detour to the Mission Interchange (Exit 340).	Existing detour route remains available.	For Alternative 1, the bridge closure will be scheduled to avoid as many winter months as possible.
Traffic	No impact.	Alternative 1 would require approximately 15 months for construction, with the bridge closed to all traffic for 10 months. Traffic would be detoured via I-90. The total detour length would be approximately 14.5 km (9 mi) and would add approximately 15 minutes of travel time. Short-term impacts to local and regional traffic from detour are expected. Disruptions could affect emergency response. Because traffic would be detoured for ten of the 15-month construction duration under Alternative 1, safety concerns related to moving traffic through the bridge construction zone would be an issue for approximately five months.	Alternative 2 would require approximately 27 months for construction. Phased construction would allow traffic to continue using the bridge, but delays would occur. Typical construction delays would be approximately 15 minutes long, but could be longer on occasion. Disruptions could affect emergency response. Also, safety concerns related to moving traffic through the bridge construction zone would be an issue for the entire construction duration.	A construction traffic control plan will be developed according to MDT Standard Specifications.
Access and Parking	No impact.	Access to properties may be temporarily affected.	Disruptions would occur to access and parking for businesses and residents.	Notification and coordination with adjacent property owners regarding temporary access will be provided. Accelerated bridge construction methods will be considered where practicable.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Construction Impacts (cont.)				
Pedestrians and Bicycles	No impact.	Bridge would be closed to pedestrians and bicyclists for approximately ten months. However, impacts due to construction would not be vastly different than the current condition since no safe pedestrian access is currently provided on the bridge.	Same impacts as Alternative 1 except that bridge would be closed to pedestrians for approximately 27 months.	No mitigation necessary.
Community Resources	No impact.	<p>Access for emergency services and school buses would be impacted during the approximately 15-month construction period, especially during the approximately 10 months of bridge closure.</p> <p>Recreational use of the river would be impacted during construction due to the recommended river closure.</p>	<p>Although traffic across the bridge would be maintained for the approximately 27 month construction period, one-lane traffic and short duration road closures would create delays.</p> <p>Same as Alternative 1.</p>	<p>Coordination with emergency service providers and schools will occur prior to construction and will be included in construction traffic control plan. Timing of the bridge closure will be scheduled to minimize impacts.</p> <p>MDT will coordinate with the COE and the MFWP regarding the recommended closure of the river through the project area during construction. MDT will also coordinate with the appropriate agencies to provide advance warning (notices, signs, etc.) about the river closure. Signing along the river would occur upstream of Mayor's Landing and at Mayor's Landing.</p>

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Construction Impacts (cont.)				
Local and Regional Economics	No impact.	<p>Traffic detours, delays, and access limitations may affect businesses.</p> <p>Motorists (employees, customers, truckers, and other delivery personnel) would have to drive additional distance for the detour.</p> <p>For safety reasons, MDT proposes to close the river to travel and fishing within the project area for approximately 15 months. Safety concerns may also restrict public access (including fishing) near the bridge during specific construction phases.</p>	<p>Traffic delays would be expected.</p> <p>For safety reasons, MDT proposes to close the river to travel and fishing within the project area for approximately 27 months. Safety concerns may also restrict public access (including fishing) near the bridge during specific construction phases.</p>	<p>Travel delays and access disruptions will be minimized to the extent practicable.</p> <p>MDT will work with agencies and interested groups such as the Chamber of Commerce to notify local and regional outfitters, guides, fishermen, and boaters about the construction and river closure schedules.</p>
Right-of-Way and Relocations	No impact.	Construction permits would be required for grading, temporary access, or temporary construction staging.	Same impacts as Alternative 1.	Early notification of affected property owners on a property-by-property basis of construction activities in order to address potential construction impacts.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Construction Impacts (cont.)				
Contaminated Sites/Hazardous Materials	No impact.	Hazardous materials could be encountered during bridge demolition and construction. Contaminated ground water may be encountered.	Same impacts as Alternative 1.	Excavated soils and ground water may require special handling and disposal due to the contamination associated with the VOC ground water plume from the BNLSC CECRA site. A remediation/reclamation plan will be developed. These activities will be coordinated with MDEQ. Solid waste and treated railroad ties and fence posts encountered during implementation of the project will be addressed in accordance with MDT Standard Specifications and applicable federal regulations. Disposal of the lead-based painted bridge girders will be addressed in accordance with MDT Standard Specifications and applicable federal regulations.
Cultural/ Archeological/ Historical Resources	No impact.	Ground disturbing activities may unexpectedly uncover cultural materials.	Same impacts as Alternative 1.	In accordance with MDT Standard Specifications, if cultural material is unexpectedly encountered during ground-disturbing activities in the project area, construction will cease immediately and a qualified archeologist will be consulted to evaluate the significance of the cultural artifacts.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Construction Impacts (cont.)				
Noise	No impact.	Construction noise would be temporary and impacts would be minor.	Same impacts as Alternative 1 except that construction duration is longer.	To minimize construction noise impacts on the local residents, contractors will adhere to local ordinances and BMPs to minimize noise impacts during construction.
Farmland	No impact.	Temporary impacts to farm operations from road closures, detours, and presence of construction equipment are expected over the approximately 15 month construction period.	Same impacts as Alternative 1, except the construction period would be approximately 27 months.	None required.
Visual Resources	No impact.	Temporary impacts to visual resources such as vegetation removal and the presence of construction equipment and dust emissions are expected over the approximately 15-month construction period.	Same impacts as Alternative 1, except the construction period would be approximately 27 months.	Mitigation measures identified for Vegetation and Air Quality will reduce the visual impacts from construction
Energy	No impact.	Construction would require an expenditure of energy.	Same impacts as Alternative 1 except that construction duration is longer.	None required.
Floodplains/EO 11988	No impact.	The temporary piers of a work bridge constructed next to the existing bridge for access during construction would create flow impediments with potential increased backwater over the approximately 15 month construction period.	Same impacts as Alternative 1, except could require two work bridges and the construction period would be approximately 27 months.	A Park County Floodplain Development Permit will be required.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Construction Impacts (cont.)				
Water Resources/ Quality	No impact.	Temporary impacts to water quality could result from spilled fuel or hazardous materials, stormwater runoff, erosion, or in-stream construction work.	Same impacts as Alternative 1 except that construction duration is longer.	An erosion and sediment control plan will be prepared and maintained in compliance with CWA Section 402/MPDES Regulations. The contractor will be expected to adhere to MDT BMPs for erosion and sediment control and comply with applicable water quality regulations including CWA Section 404 and SPA 124.
Water Body Modifications	No impact.	Construction of work bridges and coffer dams could result in temporary impacts including soil loss, wetland impacts, and sedimentation.	Same impacts as Alternative 1 except that construction duration is longer.	An erosion and sediment control plan will be prepared and maintained in compliance with CWA Section 402/MPDES regulations. The contractor will be expected to adhere to MDT BMPs for erosion and sediment control and comply with applicable water quality regulations including CWA Section 404 and SPA 124.
Wetlands	No impact.	Physical disturbance from bridge and roadway construction, including construction vehicle access, and stormwater runoff from construction activities could impact wetlands. Short-term indirect impacts from sedimentation.	Same impacts as Alternative 1 except that construction duration is longer.	Temporary impacts to wetlands will be minimized using BMPs and these temporary impacts will be restored to original condition after construction. Mitigation measures are described under Water Resources/Quality.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Construction Impacts (cont.)				
Vegetation	No impact.	Temporary impacts along roadways, including temporary loss of habitat and vegetation. Vegetation could be affected by fuel spills and compaction.	Same impacts as Alternative 1 except that construction duration is longer.	To reduce the spread and establishment of noxious weeds and to re-establish permanent vegetation, MDT will coordinate with the Park County Weed Supervisor to reclaim disturbed areas within MDT ROW and easements. These areas will be seeded from weed-free sources with desirable plant species, as recommended by the MDT Botanist. Revegetation will be conducted in accordance with MDT Standard Specifications. An erosion and sediment control plan will be prepared in compliance with CWA Section 402/ MPDES regulations.
Wildlife and Migratory Birds				
Montana Species of Special Concern	No impact.	No impacts to long-billed curlew. Short-term construction-related impacts to bald eagles could include impacts to suitable perching, roosting, or nesting habitat from the removal or alteration of riparian habitat and temporary displacement due to visual and noise disturbances. There are no documented roosts, nesting sites, or wintering activity in the area, and similar habitat is widely available along the Yellowstone River. Temporary displacement of bald eagle activity in the area would subside once construction is complete.	Same impacts as Alternative 1.	No adverse impacts to long-billed curlew would occur; therefore, no mitigation is required. Mitigation measures described under Water Resources/Quality will minimize impacts to bald eagle habitat.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Construction Impacts (cont.)				
Wildlife and Migratory Birds (cont.)				
Rural and Urban Wildlife	No impact.	Short-term impacts could include temporary displacement because of noise or water quality degradation.	Same impacts as Alternative 1 except that construction duration is longer.	Mitigation measures described under Noise and Water Resources/Quality will minimize impacts to wildlife.
Migratory Birds	No impact.	Short-term impacts could include temporary displacement because of noise or water quality degradation.	Same impacts as Alternative 1 except that construction duration is longer.	Mitigation measures described under Noise and Water Resources/Quality will minimize impacts to migratory birds.
Aquatic Species	No impact.	Yellowstone River fish and aquatic insects could be killed or temporarily displaced by construction activity in the river. Construction activities could increase turbidity and sediment.	Same impacts as Alternative 1 except that construction duration is longer.	Mitigation measures described under Water Resources/Quality will minimize impacts to aquatic species.
Threatened and Endangered Species	No impact.	No threatened or endangered species are present in the project vicinity. Therefore, no impacts to threatened and endangered species would result.	Same impacts as Alternative 1.	No adverse impacts to threatened or endangered species would occur; therefore, no mitigation is required.

Table S.1 Summary of Impacts and Mitigation by Alternative

Topic Area	No-Build	Alternative 1	Alternative 2	Mitigation
Air Quality	No impact.	Impacts could include short-term increases in dust from construction activities.	Same impacts as Alternative 1. In addition, carbon monoxide levels could increase because of traffic disruptions at the bridge.	Fugitive dust and mobile source emissions will be minimized via adherence to MDT Standard Specifications, which will limit clearing and grubbing; specify re-seeding procedures; require use of water or chemical dust suppressant; require that contractors operate in compliance with air quality standards established by federal, state, and local agencies; and require the development of a construction traffic control plan, which will minimize disruption of traffic and associated engine idle time.
Cumulative Impacts				
Pedestrian and Bicycles	No impact.	With the implementation of the 2002 <i>Urban Design Framework Master Plan</i> and the Livingston/Park County Trails Plan in addition to this project, there would be a cumulative beneficial impact from the improved multi-use connections to the area along the Yellowstone River.	Same impacts as Alternative 1.	None required.
Wetlands, Vegetation, Wildlife and Migratory Birds, and Aquatic Species	No impact.	This project's contribution to cumulative impacts for these resources is minimal when compared to other contributing activities.	Same impacts as Alternative 1.	None required.

1.0 PURPOSE AND NEED

1.1 PROJECT BACKGROUND/DESCRIPTION

1.1.1 Project Location

The proposed project is located in south central Montana in Park County on State Primary Route 11/US 89 (US 89) at mile post (MP) 55.94 (See Figure 1.1). US 89 extends north from the Yellowstone National Park boundary in the town of Gardiner to the Canadian border. Through Livingston, US 89 is also known as Park Street and provides two of Livingston's three accesses to Interstate 90 (I-90).

In this Environmental Assessment (EA), the proposed project limits include the existing Yellowstone River Bridge, the roadway approaches approximately 0.47 kilometers (km) [0.3 miles (mi)] east and west of the bridge, and Bennett Street from the intersection with US 89 to the Montana Rail Link (MRL) railroad tracks. The project area refers primarily to land within a 91-meter (m) (300-foot [ft]) radius of the centerline of project limits (Figure 1.2). The vicinity of the project refers to a larger area, which encompasses an approximate 1.6-km (1-mi) radius from the existing bridge that could be affected indirectly by the proposed actions and is not limited to the project area.

The project area is in the center of Park County, just north of the foothills to the Gallatin and Absaroka Ranges, and is located in the northeast area of the City of Livingston within T2S, R10E, and Section 7. This location can be described as a transition area connecting the Livingston urban area to the adjacent rural area. Within the project vicinity, the Yellowstone River flows from south to north and US 89 crosses the river diagonally in a southwest to northeast direction.

The surrounding land use south of US 89 is primarily undeveloped pastureland, while land use to the north is a combination of highway and railroad right-of-way (ROW). Other land uses in and around the project area include a wastewater treatment facility, city maintenance shop, radio station, motel, Krohne Antiques, and a small group of trailer residences (Figure 1.2). Bennett Street connects with US 89 from the north on the west side of the Yellowstone River and primarily serves an industrial area on the north side of the MRL railroad tracks (Figure 1.2). The MRL railroad tracks run parallel to US 89 on the north side and cross the Yellowstone River on the MRL Railroad Bridge, located directly north (downstream) of the US 89 Yellowstone River Bridge.

The segment of the Yellowstone River running beneath the bridge consists of a riparian/wetland floodplain complex dominated by cottonwoods and willows. This floodplain complex provides wildlife habitat and wildlife access to the river. In addition, there are two informal recreational accesses to the river located at the southwest and southeast corners of the bridge (Figure 1.2). Floaters and fisherman use this section of the river frequently.

Figure 1.1 Project Location Map



Figure 1.2 Proposed Project Area

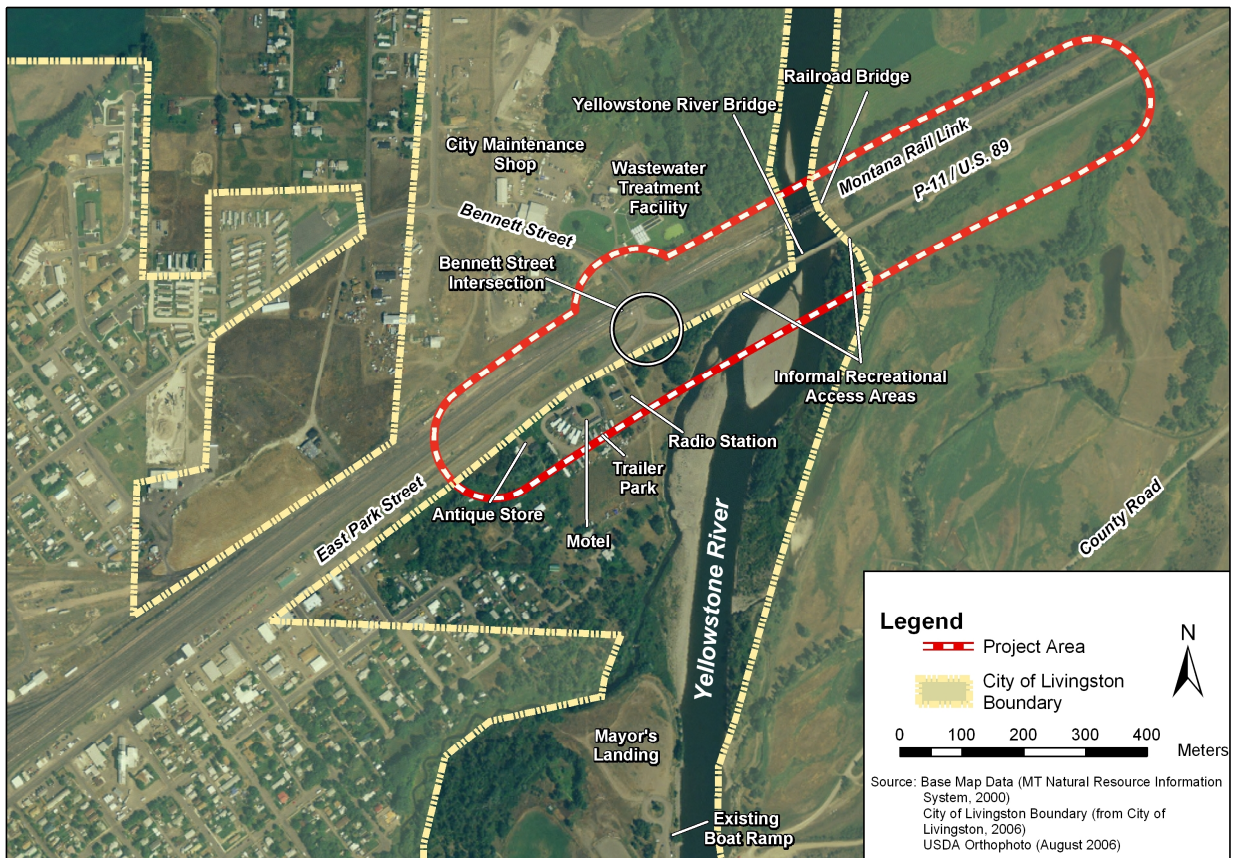


Figure 1.3 Existing Yellowstone River Bridge

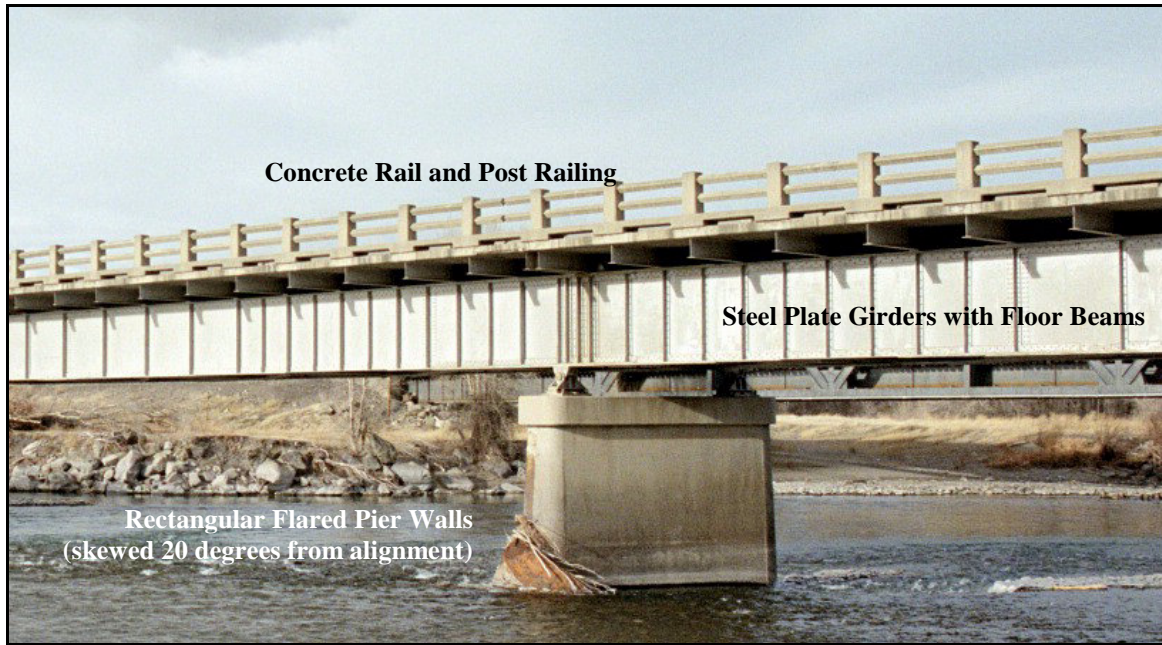


Note: The steel trusses of the MRL Bridge can be seen directly behind the highway bridge.

1.1.2 Project Description

The existing bridge on US 89 over the Yellowstone River is a five-span bridge, 152-m (500-ft) long, with two 3.3-m (11-ft) wide travel lanes (one in each direction) (pictured in Figure 1.3). The bridge is set on four flared rectangular pier walls that are skewed 20 degrees from the bridge alignment (Figure 1.4). The piers, which are approximately 1.25 m (4 ft) wide and 6.38 m (21 ft) long at the base, are offset from the piers of the railroad bridge directly downstream. The bridge railing is concrete rail and post (Figure 1.4).

Figure 1.4 Existing Bridge Elements

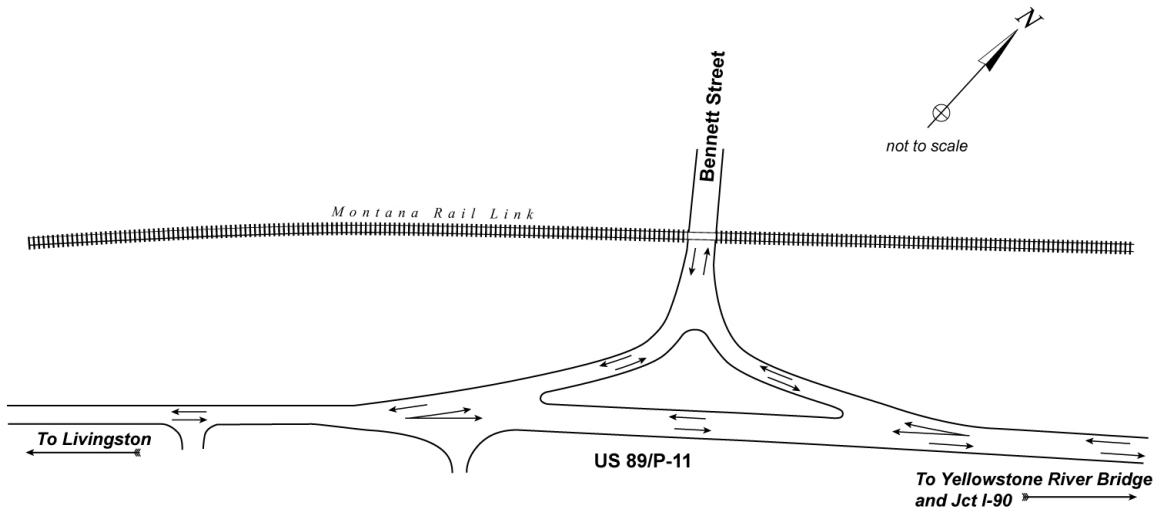


The functional classification of US 89 changes at the urban boundary (MP 55.875), which extends to the western bank of the Yellowstone River through the study area. Southwest of MP 55.875 the Montana Department of Transportation (MDT) functional classification is urban principal arterial, while northeast of MP 55.875 the MDT functional classification is rural minor arterial.

The eastern approach to the bridge includes two 3.6-m (12-ft) wide travel lanes (one in each direction) and 0.6-m (2-ft) wide shoulders. The western approach includes two 3.6-m (12-ft) wide travel lanes (one in each direction) and 0.2-m (0.7-ft) wide shoulders. Also on the western approach is the Y-configured intersection at Bennett Street (Figure 1.5). Both legs of the Y-intersection provide two lanes; one lane traveling in each direction. North of the Y-intersection, Bennett Street is a two-lane roadway with one travel lane in each direction and crosses the MRL railroad tracks. There are no turn lanes on US 89 for access to Bennett Street.

On the south side of the bridge on the west side of the river, there is an informal parking area and trail providing recreational access to the river.

Figure 1.5 Existing Bennett Street Intersection



The proposed project would replace the Yellowstone River Bridge and reconstruct the roadway approaches to the bridge. The new bridge would have wider travel lanes, shoulders, and a multi-use path for pedestrian and bicycle use on the south side of the bridge deck. The reconstructed roadway approaches would include wider shoulders that would match the shoulder width on the new bridge and transition to the existing shoulder width at the project limits. The new bridge would be longer than the existing bridge, which would allow for future construction of multi-use paths under the bridge on both sides of the river. Because the new bridge would be slightly higher than the existing bridge, the reconstruction of the approach roads would extend out from the bridge until the existing grade was met. On the western approach, this would require reconstruction through the Bennett Street intersection. As part of the reconstruction, the US 89 and Bennett Street intersection would be improved to a T-configured intersection and a left-turn lane on US 89 at Bennett Street would be implemented. There would be no changes to the Bennett Street at-grade railroad crossing or roadway north of the railroad tracks.

1.1.3 Project History

In 1996 and 1997, the Yellowstone River experienced near 100-year floods back-to-back. In response to the growing concern over flooding of the Yellowstone River, the Governor's Upper Yellowstone River Task Force was created in November 1997 to ensure that future projects affecting the river are planned and conducted in a manner that will preserve the integrity, beauty, values, and function of the upper Yellowstone River. The Task Force conducted scientific investigations of the river ecosystem and made river corridor management recommendations in August 2003 that address potential adverse effects of river channel modification, floodplain development, and natural events on the human community and riparian ecosystem.

In 2002, the City of Livingston approved the *Urban Design Framework Master Plan*, which provides recommendations pertaining to alternative modes of transportation at the Yellowstone River Bridge and design guidelines for future public works projects, including the Yellowstone River Bridge. These recommendations include providing safe lane widths for all users, accommodating multi-modal transportation needs, and incorporating unique aesthetic treatments that establish the bridge as a gateway to the community.

MDT initiated the bridge replacement project in 2002 because the structure, which was built in 1934, is functionally obsolete (narrow). Aside from routine maintenance, no modifications have been made to the original bridge structure.

1.1.4 Project Funding and Schedule

This project was nominated under the Bridge Replacement and Rehabilitation Program funding category. As of August 2006, the cost of this project has been estimated at \$9.8 million for construction, which would be provided via 80 percent federal funds and 20 percent state funds. The involvement of federal funds establishes the Federal Highway Administration (FHWA) as the oversight agency. As such, FHWA in conjunction with MDT will review the alternatives evaluation in the EA as well as public and agency input prior to selecting an alternative for implementation.

Upon completion of the EA, if no significant impacts are identified, then a Finding of No Significant Impact (FONSI) would be issued. If it is determined that there are significant impacts, an Environmental Impact Statement (EIS) would be required. If a FONSI is appropriate, MDT estimates that construction of the proposed project would start in 2011 or later depending on project development and funding.

1.2 PURPOSE FOR THE PROPOSED ACTION

The purpose of the proposed action is to improve the safety of the Yellowstone River Bridge in a manner that is affordable, that recognizes public concerns, and that complies with all applicable standards.

1.3 NEED FOR THE PROPOSED ACTION

1.3.1 Need to Improve Safety

The Yellowstone River Bridge presents safety concerns due to narrow travel lanes, lack of shoulders, and substandard bridge rail. The narrow travel lanes and lack of shoulders on the existing bridge do not currently meet MDT standards for a non-National Highway System (NHS) primary route. Consequently, if wide-load vehicles are crossing the bridge, there is not adequate room for opposing vehicles to pass safely. This can result in the potential for sideswipe-opposite direction crashes. Four crashes were reported on the bridge between 1993 and 2002. The potential for these types of crashes increases when I-90 near Livingston is closed, because all interstate traffic is detoured through the project area. During I-90 closures, which typically occur a few times each winter, commercial trucks represent a higher than normal percentage of the traffic on the narrow bridge.

The narrow travel lanes and lack of shoulders also provide no space for pedestrians and bicyclists to safely traverse the bridge. This results in potential pedestrian/bicycle conflicts with vehicles on the bridge.

1.3.2 Need to Improve Roadway Deficiencies

Bridge

The existing bridge is narrow and has substandard bridge rail. The bridge is 6.7 m (22 ft) wide from curb to curb and is classified as “functionally obsolete” because it is too narrow. Structures that are functionally obsolete and have a sufficiency rating between 50 and 80 are eligible for rehabilitation. The sufficiency rating of the existing bridge is 57.6. Although current bridge inspections indicate that

the bridge is structurally sufficient and does not show signs of immediate failure, it is not practical to rehabilitate the existing bridge to the current roadway width standard. This structure is fracture critical due to the two girder system, which means that the structure could fail if one of the girders fails because there are only two girders supporting the bridge.

Roadway Approaches

MDT standards for a primary highway recommend a paved surface width of 9.6 m (32 ft) consisting of two 3.6 m (12 ft) travel lanes and 1.2 m (4 ft) shoulders. The current roadway approaches to the bridge measure between 7.6 and 8.4 m (25.4 and 28 ft) wide. The roadway shoulders are narrow and range between 0.2 m (0.7 ft) and 0.6 m (2 ft).

1.3.3 Need to Accommodate Alternative Modes of Transportation

A multi-use network, which connects the eastern and western portions of the town as well as the area along the Yellowstone River, is proposed in the *Urban Design Framework Master Plan* (City of Livingston 2002). The *Master Plan* identifies US 89 (Park Street) as a multi-modal gateway to the community. This connection includes the Yellowstone River Bridge, which is identified as a gateway feature complete with separated bicycle and pedestrian facilities. Additionally, the City of Livingston and Park County created a Trails and Greenways Task Force in 2005 to study and develop a trails and greenways system for the City of Livingston and the area immediately surrounding the city. The current bridge does not facilitate pedestrian use of the bridge, as the structure is narrow with minimal shoulder area and substandard bridge rail.

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2.0 ALTERNATIVES

This chapter presents the process for developing and analyzing the alternatives, including the preferred alternative. The Build Alternatives proposed for the Yellowstone River Bridge project provide for the replacement of the bridge on US 89 to achieve the project purpose and need, as discussed in Chapter 1. The alternatives also include the reconstruction of the roadway approaches to the bridge, including the Bennett Street intersection, and accommodate alternate modes of transportation. Alternatives initially considered but eliminated from further analyses are discussed in Section 2.4.

2.1 DEVELOPMENT OF ALTERNATIVES

As discussed in Section 1.1.3, MDT initiated this project in 2002 to address the primary needs of replacing the narrow Yellowstone River Bridge and improving vehicular safety. During the course of one public meeting and two advisory committee meetings, alternatives and design treatments were identified by the community, the advisory committee, and the project team. These alternatives were screened by the project team to determine which alternatives to carry forward for additional analysis.

This screening was based on a “fatal flaw” analysis, which considered several factors. An alternative was eliminated if it (1) did not meet the primary project purpose and need to improve safety, (2) caused more environmental impacts than a similar alternative, (3) was beyond the scope of this project, (4) did not meet MDT design standards, or (5) was determined to be cost prohibitive. Costs were estimated according to average industry construction costs for the year 2011. Alternatives that did not adequately meet the screening criteria were eliminated from further consideration.

2.1.1 Design Criteria

The design criteria for the project were developed by the project team in consultation with the advisory committee. These criteria, which are outlined below, were intended to provide a basis for evaluating whether or not the alternatives met the project purpose and need and were consistent with MDT standards as well as local planning guidance.

Bridge Functionality

- Design bridge to MDT standards to improve safety.
- Accommodate multi-modal users on the bridge (trucks, cars, pedestrians, bicyclists).

Hydraulics

- Consider the Upper Yellowstone River Task Force recommendations.
- Design the low beam elevation of the bridge at least as high as the existing elevation while also evaluating the low beam for ice, debris, boater recreation, and design geometrics.
- Consider minimizing backwater while achieving a cost-effective design in the hydraulic evaluation.
- Minimize the number and size of piers.
- Determine the need for riprap and other bank stabilization measures based on engineering analysis of proposed conditions.

Aesthetics

- Consider the recommendations in the *Livingston Patterns Downtown and Urban Design Framework Master Plan* regarding unique aesthetic features and the historic context of Livingston.

- Consider use of natural building materials that will blend with the setting and environment.
- Consider the view of the river as people drive/ride/walk over it.

Recreation Functionality

- Consider accommodating a future pedestrian/bicycle trail under the bridge along the Yellowstone River.
- Accommodate pedestrian access to the river.
- Consider the safety of boaters in determining pier size and placement.

Wildlife/Biological Resources

- Minimize impact to riparian areas.
- Accommodate wildlife crossing under the bridge.
- Consider fisheries.

Utilities

- Consider accommodating water, sewer, and other utilities on the new bridge as requested.

Roadway

- Incorporate improvements to the bridge approaches that are consistent with bridge funding.
- Design roadway horizontal and vertical alignments to accommodate the bridge design objectives.
- Ensure roadway and roadside safety by maintaining consistency with approved standards.
- Minimize impacts to the surrounding environment.
- Provide for alternate modes of transportation by ensuring that the future multi-use paths are feasible without necessitating future roadway modifications.
- Ensure adequate intersection sight distance is provided at the Bennett Street intersection.
- Minimize the need for additional right-of-way.
- Minimize construction and traffic control cost through innovative and thoughtful design practices.

2.2 ALTERNATIVES

As a result of the alternatives development process described earlier, alternatives were identified to be carried forward for detailed evaluation in the EA. These alternatives include the No-Build Alternative and two Build Alternatives. Subsequently, a Preferred Alternative was identified and is discussed in this section. Alternatives that were considered but eliminated from further analysis are discussed in Section 2.4.

2.2.1 No-Build Alternative

Under the No-Build Alternative, existing conditions in the project corridor would remain. There would be no improvements to the Yellowstone River Bridge or roadway approaches to the bridge other than ongoing regular maintenance. The US 89 and Bennett Street intersection would also remain in its current location and configuration.

The Yellowstone River Bridge would continue to be a 5-span, steel girder, functionally obsolete bridge with narrow travel lanes and no shoulders or pedestrian elements. The existing bridge includes one 3.3-m (11-ft) wide travel lane in each direction with no shoulders for a total paved width of 6.7 m (22 ft) (Figure 2.1). The eastern and western roadway approaches include one 3.6-m (12-ft) wide travel lane in each direction. The western approach includes 0.2-m (0.7-ft) wide shoulders for a total

paved width of 7.6 m (25.4 ft) (Figure 2.2). The eastern approach includes 0.6-m (2-ft) wide shoulders for a total paved width of 8.4 m (28 ft) (Figure 2.2).

The length of the bridge would continue to be 152 m (500 ft) and the alignment of the bridge would continue to be on a tangent. The railroad bridge piers and Yellowstone River Bridge piers would continue to be offset from each other. The characteristics of the roadway approaches, including the US 89 and Bennett Street intersection, would be perpetuated. There would continue to be informal parking for recreational access to the river near the southwest and southeast corners of the bridge.

Figure 2.1 No-Build Alternative: Bridge Typical Section

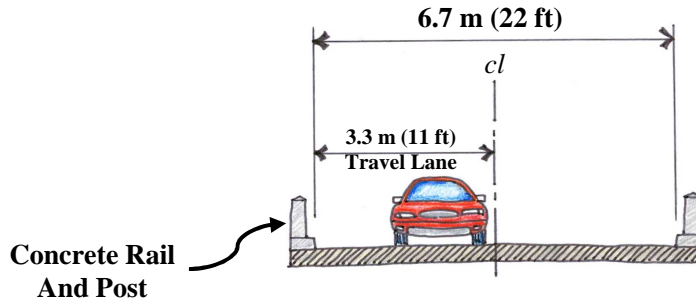
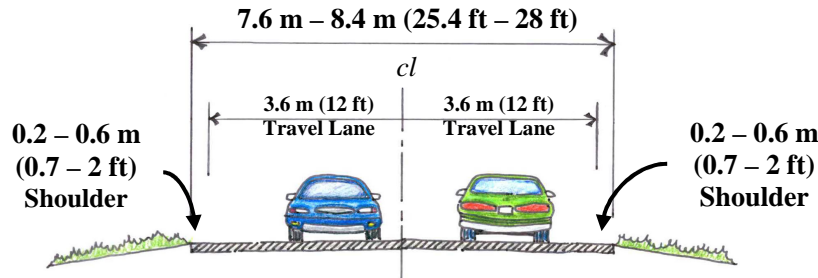


Figure 2.2 No-Build Alternative: Roadway Typical Section (bridge approaches)



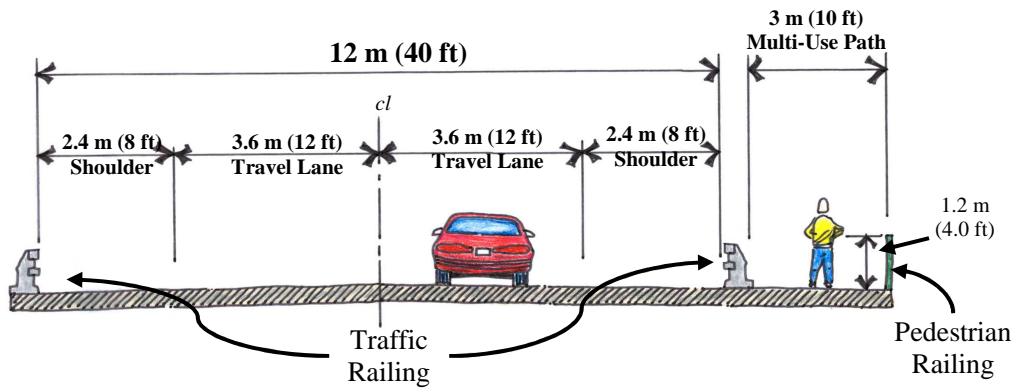
2.2.2 Build Alternatives

Alternative 1

Bridge Typical Section

As per MDT standards for a non-NHS primary route, the bridge would include one 3.6-m (12-ft) wide travel lane in each direction and 2.4-m (8-ft) wide shoulders. The bridge would also include a 3-m (10-ft) multi-use path along the south side of the bridge deck (Figure 2.3).

Figure 2.3 Alternatives 1 and 2: Bridge Typical Section



Bridge Design

The proposed Yellowstone River Bridge on US 89 would be a four-span, steel girder structure longer than the existing highway bridge. It may be possible to use haunched girders on this alternative, which would enhance the aesthetics of the bridge by giving it a more slender appearance. The proposed alignment would be offset downstream of the existing bridge (north towards the railroad bridge) by approximately 7.6 m (25 ft). The vertical alignment of the bridge would be slightly raised so that the low beam would match or exceed the existing clearance. The vertical alignment includes a crest vertical curve approximately centered along the length of the bridge. This would improve the intersection sight distance at the Bennett Street intersection, maintain the existing clearance for floaters, and possibly provide additional floater clearance under the center span of the new bridge. The vertical curve may also add to the visual appeal of the new bridge.

In order to optimize hydraulic performance of the bridge, three single shaft piers (non-skewed) would be used in the substructure of the bridge (Figure 2.4). There would be one shaft for each pier structure (Figure 2.5); however, the shafts are generally larger in diameter than a double shaft pier (Figure 2.11).

The pier cap design for Alternative 1 has not yet been determined. The pier cap shown in Figure 2.5 is the ordinary hammerhead pier cap. To minimize hydraulic impacts and provide the optimal design, MDT is evaluating other options such as an integral pier cap (Figure 2.6). The specific bridge elements will be further refined and determined during final design.

Figure 2.4 Alternative 1: Bridge Alignment

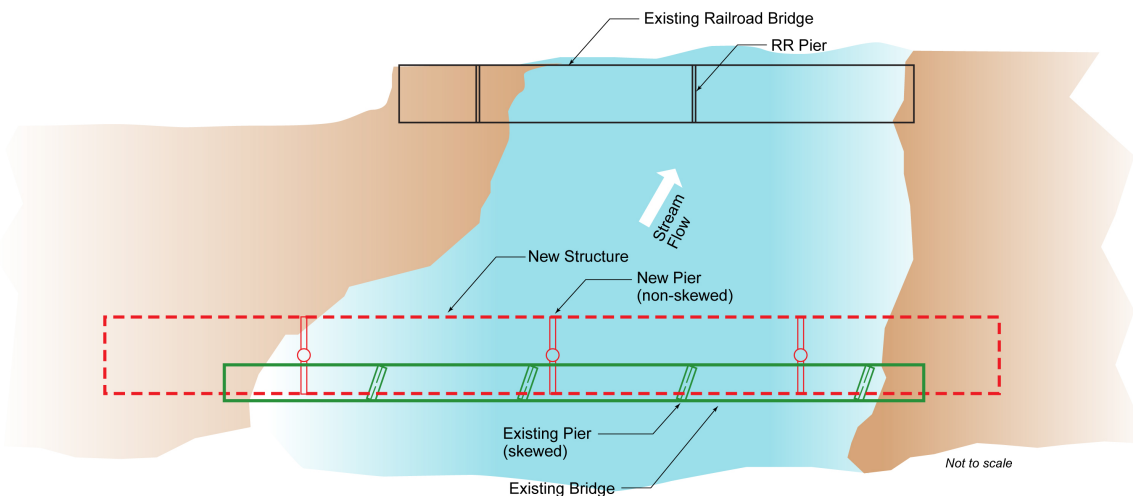


Figure 2.5 Alternative 1: Bridge Superstructure and Piers with Hammerhead Pier Cap

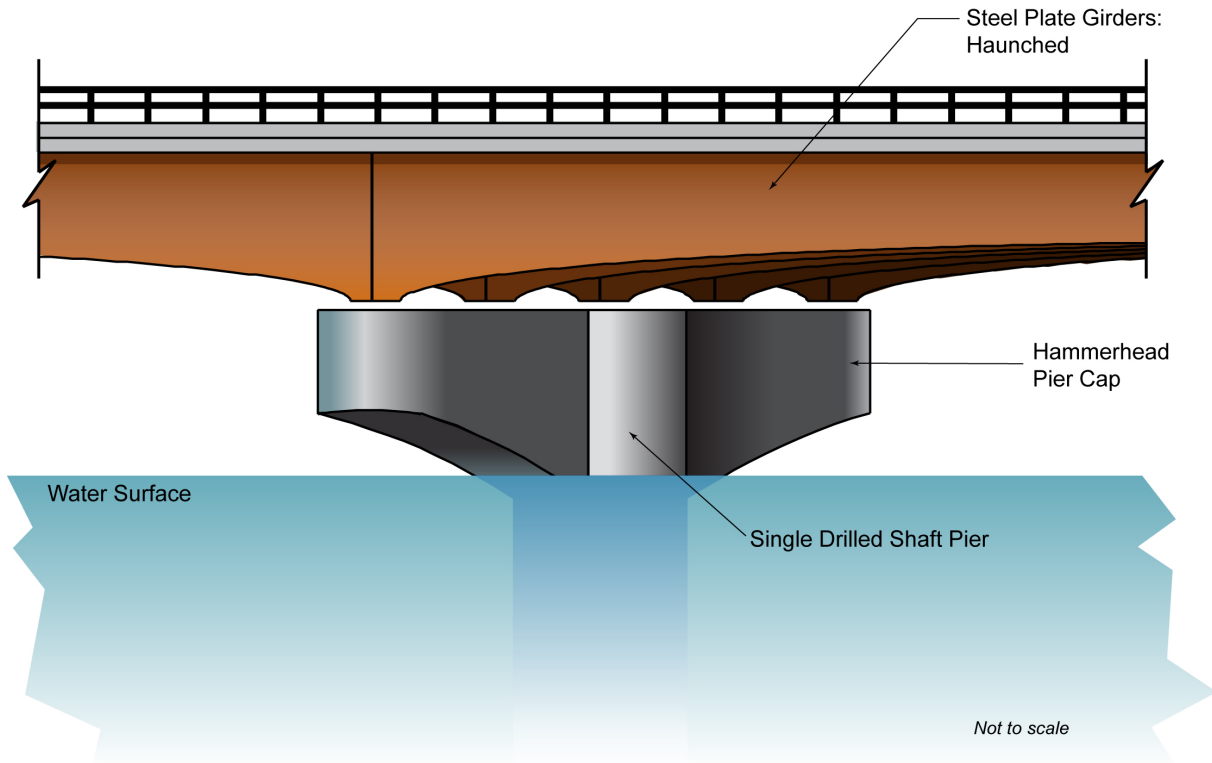
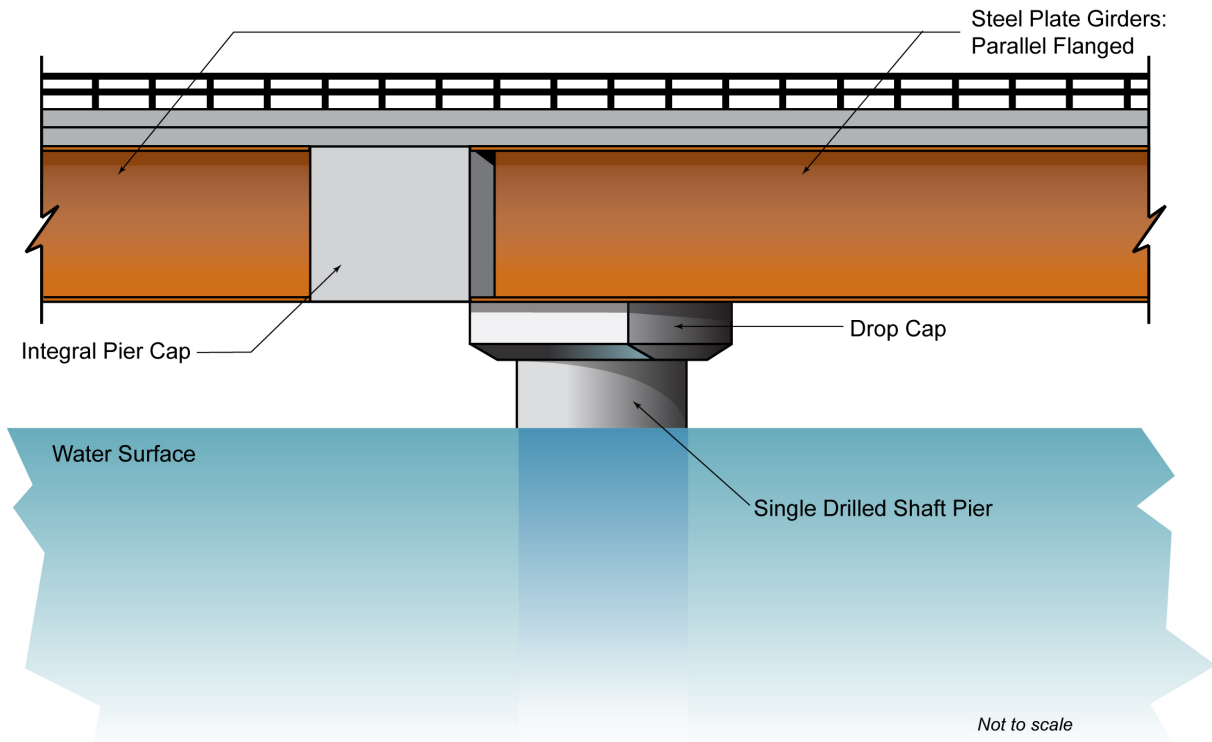


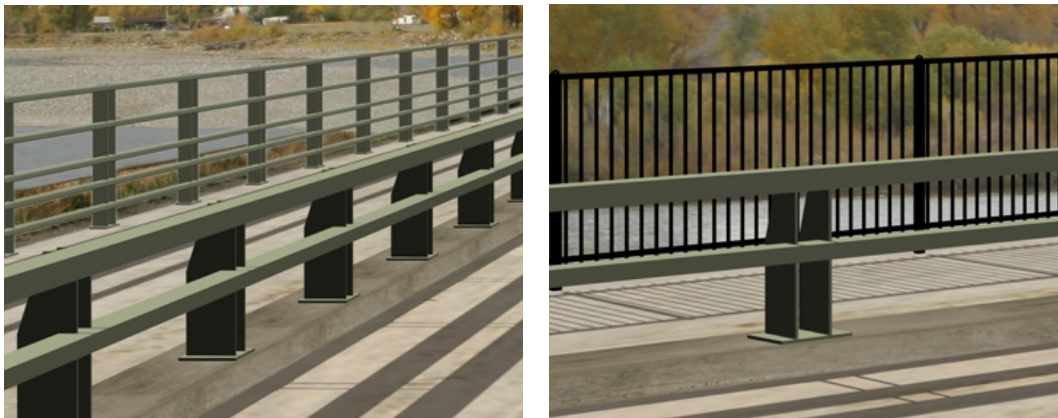
Figure 2.6 Alternative 1: Bridge Superstructure and Piers with Integral Pier Cap



Traffic railing on the north side of the bridge deck and between the shoulder and 3-m (10-ft) wide multi-use path on the south side of the bridge would likely be steel box tube railing. MDT is considering two types of traffic railing on the bridge. The first type would be a rail mounted on a curb and the second type would be a rail mounted flush with the top of the deck. If the rail is mounted on a curb, the curb would separate the drainage of the roadway from the multi-use path and would provide a continuous brush curb for pedestrians along the traffic rail. A rail mounted flush with the top of the deck would reduce the time and cost of construction and improve the quality of the deck.

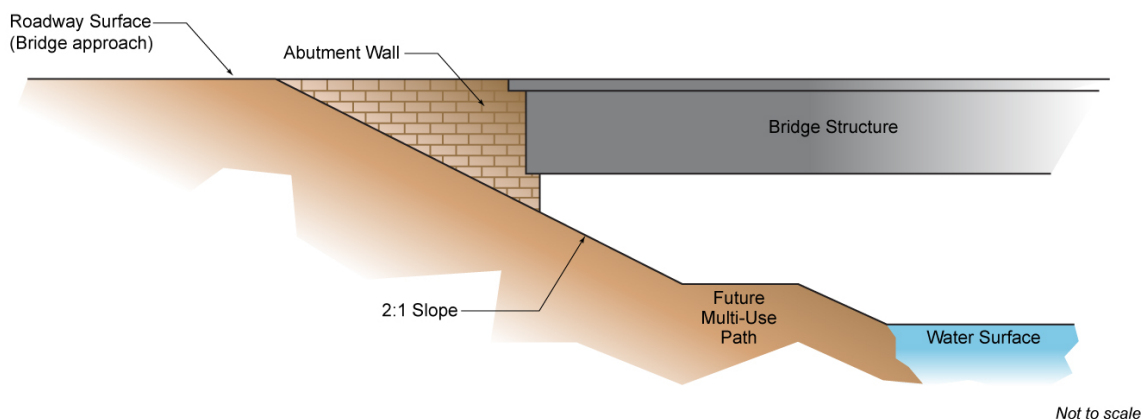
The pedestrian railing would either be horizontal railing or vertical picket, based on community input (Figure 2.7). Both the traffic railing and pedestrian railing would meet American Association of State Highway and Transportation Officials (AASHTO) bridge design specifications.

Figure 2.7 Alternatives 1 and 2: Bridge Railing Examples



In addition, the longer bridge length could accommodate the future construction of 3-m (10-ft) wide multi-use paths below the bridge on either side of the river, between the river channel and the bridge abutment. Although MDT would not construct these multi-use paths as part of this project, this configuration is shown in Figure 2.8 for illustrative purposes only.

Figure 2.8 Alternatives 1 and 2: Multi-use Path Configuration Underneath the Bridge



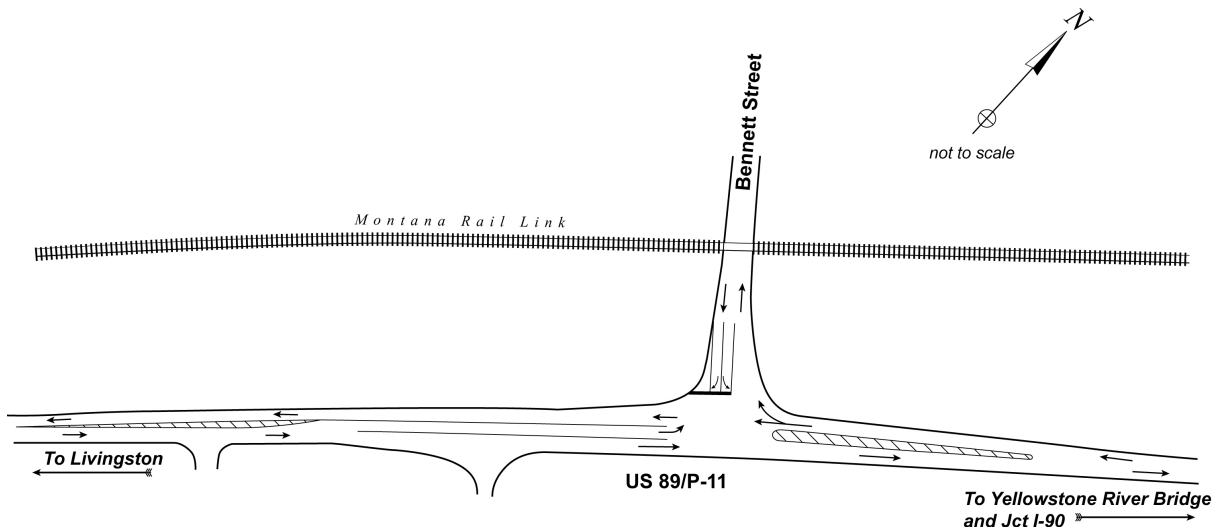
Bridge Approaches

The roadway approaches to the bridge would include one 3.6-m (12-ft) travel lane in each direction, but other elements would vary based on site conditions. The 3-m (10-ft) multi-use path on the bridge

would extend to the reconstructed roadway approaches and end as the approaches transition to the existing roadway. If the parking areas discussed under Potential Enhancements are developed, the multi-use path would connect to them.

The US 89 and Bennett Street intersection (Figure 2.9), on the west approach, would need to be reconstructed due to the change in the vertical grade and horizontal alignment of the roadway approach. Because the reconstructed roadway approaches would require changes to this intersection, MDT proposes to reconfigure the existing Bennett Street Y-configured intersection (See Figure 1.5) to a T-configured intersection to improve safety at this location. The reconfigured intersection would include a left turn lane on US 89 for eastbound traffic turning onto Bennett Street. Between US 89 and the railroad tracks, Bennett Street would have one travel lane in each direction. The southbound lane would also have a left turn lane and a right turn lane for access to US 89. All of the proposed travel lanes on US 89 and Bennett Street would be 3.6 m (12 ft) wide. Shoulders on US 89 would be 2.4 m (8.0 ft) wide and the shoulders on Bennett Street would be 0.6 m (2 ft) wide. There would be no changes to the railroad crossing at Bennett Street or the roadway north of the railroad tracks.

Figure 2.9 Alternative 1: US 89 and Bennett Street Intersection



Construction

The single shaft pier configuration used in this alternative would not allow MDT to construct the bridge in phases. For this reason, this alternative would require that the existing bridge be closed and traffic be detoured during construction of the new bridge. In order to gain access west of the bridge, westbound traffic would need to travel west on I-90 to Exit 333 at Park Avenue. Eastbound traffic on Park Avenue through Livingston would need to access I-90 from Exit 333 and travel east on I-90 to Exit 337. The total detour length would be approximately 14.5 km (9 mi).

The existing Y-configured intersection at US 89 and Bennett Street would allow two-way traffic through the intersection from the west and north through most of the construction duration. This is because the west leg of the existing intersection could be used to maintain access to Bennett Street for eastbound traffic on US 89 as well as access to downtown Livingston for southbound traffic on Bennett Street.

Construction is anticipated to last approximately 15 months, but the bridge would only be closed for approximately ten months.

Alternative 2

The proposed bridge design for Alternative 2 would be similar to Alternative 1 with the following exceptions as described below. The primary differences would be pier types, bridge substructure, and construction.

Bridge Design

Alternative 2 would also have four spans but would include three double shaft piers on an approximately 30-degree skew. Each pier structure would be arranged parallel to the river flow (See Figures 2.10 and 2.11). Although this pier type would reduce the size of the individual pier shafts as compared with Alternative 1, there would be two pier shafts instead of one and it would not provide optimum hydraulic performance. Alternative 2 would also incorporate parallel flanged girders (Figure 2.11) because haunched girders (Figure 2.5) are not appropriate for bridges constructed on a skew.

Figure 2.10 Alternative 2: Bridge Alignment

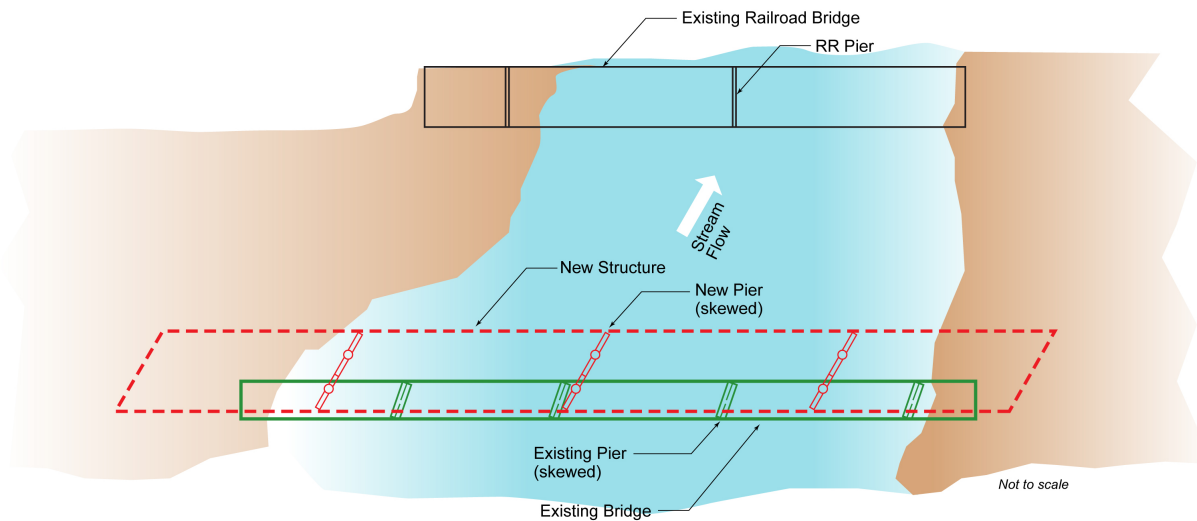
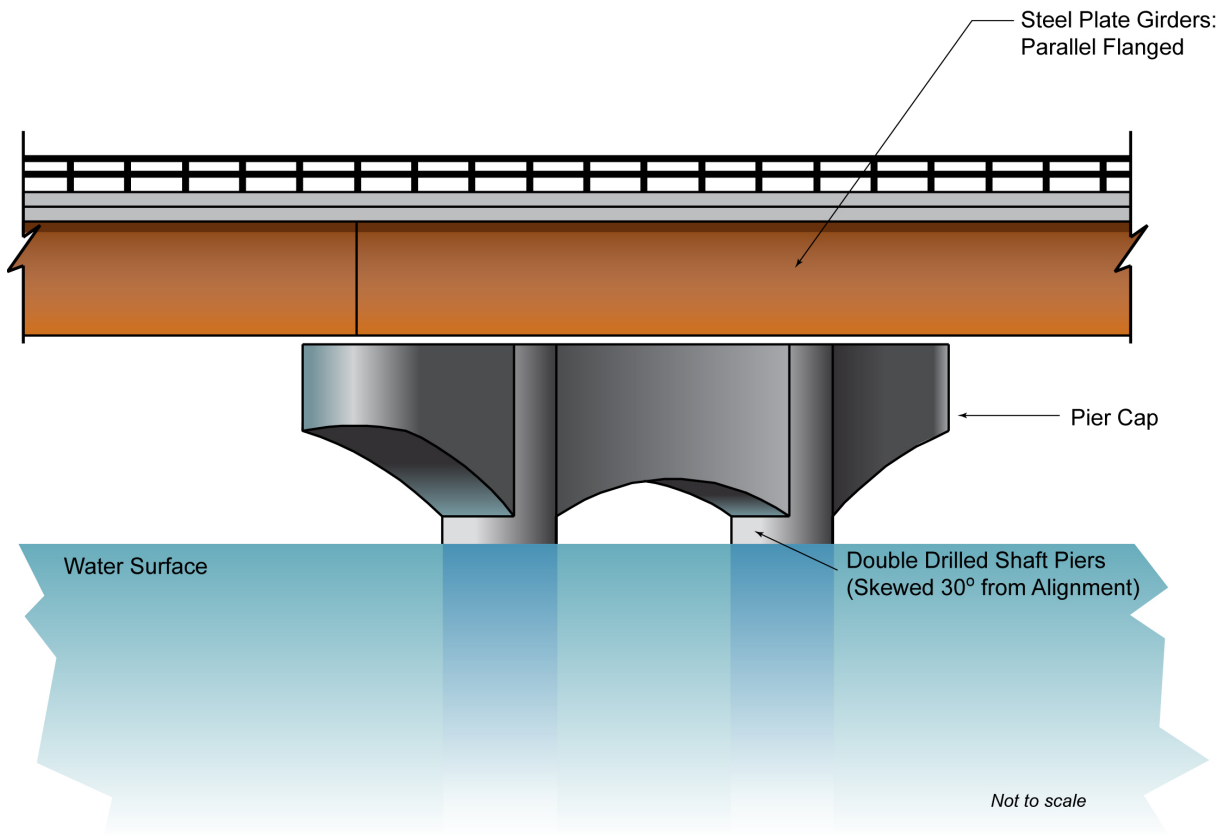


Figure 2.11 Alternative 2: Bridge Superstructure and Piers



Construction

Another major difference between Alternative 1 and Alternative 2 would be in the construction methods. The proposed pier type for Alternative 2 would facilitate phased construction, so the existing bridge could remain open and a traffic detour would not be required. However, the construction phase of the bridge under this method would last longer. Phase 1 would begin with construction of the north half of the new bridge adjacent to the existing bridge. During Phase 1, traffic would continue to use the existing bridge. After construction of the north half of the bridge is completed, Phase 2 would begin and traffic would be routed onto the new north half of the bridge. The newly constructed north half of the bridge would provide enough width on the bridge deck to accommodate two temporary lanes of traffic, but the roadway would occasionally be limited to one lane of traffic or require short duration roadway closures. The existing bridge would then be demolished and the south half of the new bridge would be constructed. Construction would last approximately 27 months.

All other alternative elements would be the same as described for Alternative 1, including the bridge and roadway approach typical sections (including the Bennett Street intersection) and multi-use path elements.

Potential Enhancements

If funding and ROW are available, MDT would consider constructing gravel parking lots in the project area. These parking areas could be included under either of the Build Alternatives if funding and ROW are available. It is anticipated that these potential parking areas would be on the south side of US 89; one on the east approach of the bridge and one on the west approach of the bridge. If the parking areas

are included in the project, the parking area on the west approach would be configured so that traffic from Bennett Street could proceed directly across US 89 to enter the parking area. The parking areas also could be connected to the proposed multi-use path along the south side of US 89.

2.3 SELECTION OF THE PREFERRED ALTERNATIVE

The Build Alternatives meet the project purpose and need by improving the safety of the Yellowstone River Bridge. Compared to the No-Build Alternative, both Build Alternatives would improve safety for vehicles as well as pedestrians and bicyclists. Additionally, both Build Alternatives would provide a beneficial impact by increasing the hydraulic opening, better aligning the bridge to the Yellowstone River, and reducing the number of piers in the water. However, the hydraulic benefits associated with these proposed improvements would not be realized until the downstream railroad structure is replaced or substantially modified.

MDT and FHWA have identified Alternative 1 as the Preferred Alternative. The bridge design in Alternative 1 would provide better hydraulic performance long-term than the bridge design in Alternative 2 due to the single shaft piers. The river is very dynamic in this location and changes channel location frequently. The double shaft piers proposed under Alternative 2 would be susceptible to debris and ice accumulation and pier scour as the approach angle of the river changes.

Alternative 1 would better serve the safety of boaters long-term as compared with Alternative 2. As channel migration occurs over time, the single shaft pier design would minimize debris accumulation and result in less impediment to boaters as they pass through the project area.

The shorter construction duration of Alternative 1 as compared with Alternative 2 would have two primary benefits. Because the segment of the river running through the project area would be closed during construction (dependant on coordination with the US Army Corps of Engineers [COE] and Montana Fish, Wildlife and Parks [MFWP]), recreational river users and river outfitters that utilize this segment of the river would lose access for less time than under Alternative 2. Also, the temporary construction-related impacts to wildlife, aquatic resources, and the river itself would be lessened with the shorter construction duration of Alternative 1.

Alternative 1 would require closure of the bridge to vehicular traffic for approximately ten months, which would result in detouring traffic to I-90. The bridge would remain open to traffic during construction under Alternative 2. However, construction-related traffic delays and disruption would still occur under Alternative 2 and the duration would be approximately 27 months as compared with approximately 15 months under Alternative 1. Also, because traffic would be detoured for ten of the 15 month construction duration under Alternative 1, safety concerns related to moving traffic through construction zones would only be an issue for approximately five months. Under Alternative 2, these safety concerns would exist for the entire construction duration; approximately 27 months.

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED

The following alternatives were not carried forward for detailed analysis in this EA because they (1) did not meet the primary project purpose and need to improve safety, (2) caused more environmental impacts than a similar alternative, (3) were beyond the scope of this project, (4) did not meet MDT design standards, or (5) were determined to be cost prohibitive.

Bridge Design

- Design an arch, truss, or cable stayed bridge. These design options are not necessary based on the span of this bridge and would be cost prohibitive. These design options would also not preserve the views from the bridge.
- Design bridge to clear span the river. Clear spanning the river, so that no piers are placed in the Yellowstone River, is not a recommendation of the Yellowstone River Task Force. The recommendations regarding zero-backwater standards were not meant to imply that clear spanning is necessary or feasible. This type of design would also be cost prohibitive.
- Design bridge with MDT Urban Design Standards. Urban and rural standards apply to roadways, not bridges. Bridge design standards for a non-NHS primary route are two 3.6 m (12 ft) traffic lanes with 2.4 m (8 ft) shoulders on each side as represented in both of the Build Alternatives.
- Design the bridge narrower than MDT design standards to provide traffic calming. Standard design width is appropriate and justified in this situation and reducing the width or eliminating shoulders would be a safety hazard. Traffic studies clearly indicate the need for wider travel lanes and shoulders for safe recovery zones on the bridge. If the bridge were constructed narrower than design standards, the structure would be obsolete under FHWA guidelines. This design would not meet the purpose and need to improve safety on the bridge or MDT design standards.

Other Design Issues

- Correct the alignment of the river upstream by constructing a jetty near Mayor's Landing. Bridge funding would not cover this work because it would be beyond the scope of this project.
- Lower speed limit to 40 km/h (25 mph) on bridge to encourage pedestrian use and promote safety. An analysis of speed changes for this section of US 89 would have to be determined by a separate study after this project is completed.

Bennett Street Intersection

- Construct a grade separated intersection at Bennett Street. This type of intersection at this location would be cost prohibitive and not geometrically feasible. If Bennett Street were designed as an overpass, it would be long because in addition to going over US 89, the overpass structure would need to go over the MRL Railroad, which would be an additional cost. Geometrically, it may not be feasible to design a Bennett Street overpass that ties back into US 89 because of insufficient space due to the proximity of the river and the bridge.
- Construct a grade-separated multi-use path with the grade-separated intersection at Bennett Street to provide pedestrian and bicycle access across the railroad tracks and Park Street. As stated above, this type of intersection at this location would be cost prohibitive and not geometrically feasible.
- Relocate the Bennett Street intersection to "O" Street via a frontage road. This alternative would be outside the scope of the project. MDT staff noted that this idea had merit but would need to be addressed as a separate project.

Multi-Use Path on Bridge

- Construct a multi-use path on the north side of the bridge. Constructing a multi-use path on the north side of the bridge would compromise safety because of potential conflicts with the MRL Railroad, and pedestrians would likely use the south side of Park Street, forcing them to cross US 89 in order to access a path on the north side of the bridge. Also, for safety reasons, the railroad would be unlikely to support the development of a pedestrian facility that is closer to the railroad when there are other options that are farther from the railroad. This design would not meet the purpose and need to improve pedestrian safety as well as the proposed alternatives.

- Construct a multi-use path on both sides of the bridge. Similar to constructing a path on the north side only, this design would also not meet the purpose and need to improve pedestrian safety as well as the proposed alternatives and would be cost prohibitive.
- Construct a 2.4-m (8-ft) wide multi-use path. AASHTO guidelines recommend a 3 m (10 ft) width for a multi-use path to promote safety. The narrower design would not meet the purpose and need to improve pedestrian safety as well as the proposed alternatives.
- Construct a 3.6-m (12-ft) wide multi-use path. A 3-m (10-ft) wide multi-use path would be sufficient based on AASHTO guidelines; therefore, this alternative would be cost prohibitive.
- Construct a multi-use path that is separated from the roadway bridge and lower than the bridge. This alternative would create conflicts with agency direction regarding minimum heights for the bridge needed for safety reasons related to hydraulics and flooding. If the bridge were raised to accommodate this lowered element, the cost would be prohibitive.
- Separate multi-use path from travel lanes with striping instead of a barrier. Although pedestrians/bicyclists would be separated from traffic, there would be no physical barrier which is a safety issue. This design would not meet the purpose and need to improve pedestrian safety as well as the proposed alternatives.

Construction Methods

- Detour all traffic to US 89 Mission Interchange (Exit 340). Implementing this detour for the duration of the construction period would require an upgrade of the detour roads; therefore, this detour would be cost prohibitive.
- Construct a temporary bridge at Mayor's Landing to provide a detour route. Constructing this detour would require upgrading detour roads to accommodate large trucks. Construction of a new bridge on a new alignment would also be required; therefore, this detour would be cost prohibitive.
- Construct a temporary bridge adjacent to the existing bridge to be used as a detour route during construction. Constructing this temporary bridge would be cost prohibitive, would increase temporary hydraulic impacts, and would increase impacts to habitat in the project area.

Aesthetic Elements

- Construct entry pylons. The construction of entry pylons at each corner of the bridge was considered to address the community's desire to create a "gateway" into Livingston at the bridge. The advisory committee indicated that this element would detract from the natural context of the surrounding area. Therefore, this element was removed from the bridge design.

3.0 IMPACTS

This section provides an assessment of how the proposed project is likely to affect the social, economic, and physical environment through comparison of impacts and effects of the Build Alternatives and the No-Build Alternative. Long-term effects on social, economic, environmental, and transportation factors associated with the proposed action are described in this section. Short-term effects, or those anticipated to occur during construction, as well as secondary and cumulative effects are also described in this section.

Guidance provided by the National Environmental Policy Act (NEPA, 42 U.S.C. 4332 (2)(c)), Montana Environmental Policy Act (MEPA, 2-3-104 and 75-1-201 M.C.A.), MDT and the FHWA Technical Advisory T6640.8A identify subject areas requiring analysis. The following subjects have been identified and are documented in this chapter:

Topic Areas with No Impacts

- Energy
- Parks and Recreation/L&WCF – Section 6(f)
- Wild and Scenic Rivers
- Air Quality
- Environmental Justice – Executive Order 12898/Title VI

Effects on the Transportation System

- Access and Traffic
- Safety
- Pedestrians and Bicycles
- Parking

Effects on the Community

- Community Resources
- Local and Regional Economics
- Land Use and Local Plans
- Right-of-Way and Relocations
- Utilities
- Contaminated Sites/Hazardous Materials
- Cultural/Archaeological/Historical Resources
- Farmland
- Noise
- Visual Resources

Effects on the Natural and Physical Environment

- Floodplains – Executive Order 11988
- Water Resources/Quality
- Water Body Modifications
- Wetlands and Other Waters of the U.S.– Executive Order 11988
- Vegetation

- Wildlife and Migratory Birds
- Aquatic Species
- Threatened and Endangered Species
- Section 4(f) Resources

3.1 TOPIC AREAS WITH NO IMPACTS

3.1.1 Parks and Recreation/NL&WCF – Section 6(f)

Section 6(f) resources are those acquired through the use of Land and Water Conservation Funds (LWCF). The LWCF (Public Law 88-578) was enacted by Congress to provide money to federal, state, and local governments to purchase lands for maintaining or enhancing recreational opportunities, clean water, wildlife habitat, scenic resources, historic sites, and wilderness areas (Land and Water Conservation Fund, 2003, U.S. Forest Service, 2003). Resources that have been purchased using LWCF cannot be converted to highway uses without the approval of the Department of Interior's National Park Service (NPS). Section 6(f) directs NPS to assure that replacement lands of equal value, location, and usefulness are provided to mitigate conversions of these lands for highway use.

No Section 6(f) National Land and Water Conservation Fund Act (16 USC 460) properties have been identified within the vicinity of the project (see Appendix B, MFWP letter dated September 19, 2003). Therefore, there would be no impacts on such properties from the proposed project.

3.1.2 Wild and Scenic Rivers

The Wild and Scenic Rivers Act (16 USC 1271-1287) (Public Law 90-542) established a National Wild and Scenic Rivers System and prescribed methods and standards through which additional rivers may be identified and added to the system. No Wild and Scenic Rivers have been identified within the vicinity of the proposed improvements; therefore, no impacts to Wild and Scenic Rivers would occur from the proposed project.

3.1.3 Air Quality

The proposed improvements would not increase the vehicular capacity of US 89; therefore, no additional traffic is anticipated as a result of the proposed improvements. Furthermore, the improvements would better accommodate alternative modes of travel with the addition of a multi-use path and accommodations for future multi-use paths alongside the river. The proposed project is located in an unclassified/attainment area of Montana for air quality under 40 CFR 81.327, as amended. As a result, the proposed alternatives are not covered under the U.S. Environmental Protection Agency's (EPA) "Final Rule" of November 24, 1993 on Air Quality Conformity. Therefore, the No-Build Alternative and both Build Alternatives would comply with Section 176(c) of the Clean Air Act (53 U.S.C. 7521 (a)), as amended.

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act, which are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted into the air when the fuel evaporates or passes through the engine unburned. Other toxic compounds are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal toxics also result from engine wear or from impurities in oil or gasoline.

This project would not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to

the No-Build Alternative. As such, FHWA has determined that this project would generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. Consequently, this effort is exempt from analysis for MSATs.

Moreover, interim FHWA guidance on air toxic analysis states that EPA regulations for vehicle engines and fuels will cause overall MSATs to decline significantly over the next 20 years (FHWA 2003). Even after accounting for a 64 percent increase in vehicle miles traveled (VMT), FHWA predicts MSATs will decline in the range of 57 percent to 87 percent from 2000 to 2020 based on regulations now in effect, even with a projected 64 percent increase in VMT. This will both reduce the background level of MSATs as well as the possibility of even minor MSAT emissions from this project.

Short-term air quality impacts related to construction are evaluated in Section 3.5.

3.1.4 Noise

The proposed project is not a Type 1 project, as defined in 23 CFR 772. A Type 1 project is defined as one that adds travel lanes, significantly changes the horizontal or vertical alignment, or builds a new road on a new location. A noise analysis is not required on projects that are not Type 1. However, traffic volumes for the proposed project are expected to increase by 28 percent by the year 2030 and there are a number of cultural resources within and near the project area that could be impacted. For this reason, a preliminary traffic noise assessment for the Yellowstone Bridge NE Livingston project was conducted to assess impacts related to potential Section 4(f) properties located along the project corridor.

The Livingston Noise Technical Memorandum (May 2003) concluded that no noise level increases would occur as a result of the proposed improvements. Traffic volume increases for the No-Build and Build Alternatives would only account for an average of 0.5 dBA rise for the receptors along the project corridor. No receptors meet or exceed the FHWA noise criteria standards for residences or motels of 67 dBA nor do they approach at 66 dBA according to Montana Department of Transportation guidelines.

Short-term noise impacts related to construction are evaluated in Section 3.5.

3.1.5 Environmental Justice – Executive Order 12898/Title VI

The proposed alternatives would not have a disproportionately high or adverse human health or environmental impact on minority and/or low income populations in the project area. Therefore, this project complies with Executive Order (EO) 12898, issued in February 1994. The proposed alternatives also comply with the provisions of Title VI of the Civil Rights Act of 1964 (42 USC 2000(d), as amended) as per FHWA's regulation (23 CFR 200).

3.2 EFFECTS ON THE TRANSPORTATION SYSTEM

This section describes the existing and future conditions of the transportation system in the proposed project corridor, including the Yellowstone River Bridge on US 89 and the roadway approaches extending approximately 0.47 km (0.3 mi) east and west of the bridge, and Bennett Street from US 89 to the MRL railroad tracks.

3.2.1 Access and Traffic

Access

MDT has existing access control on the south side of US 89 beginning at the east end of the bridge and continuing east past the end of the project area. MDT acquired this existing access control in 1982 on Project F 11-1(6)56, X970-006, Livingston-East. As discussed below under Local Access, there is one private access point within this access control area. No other access control exists within the project area.

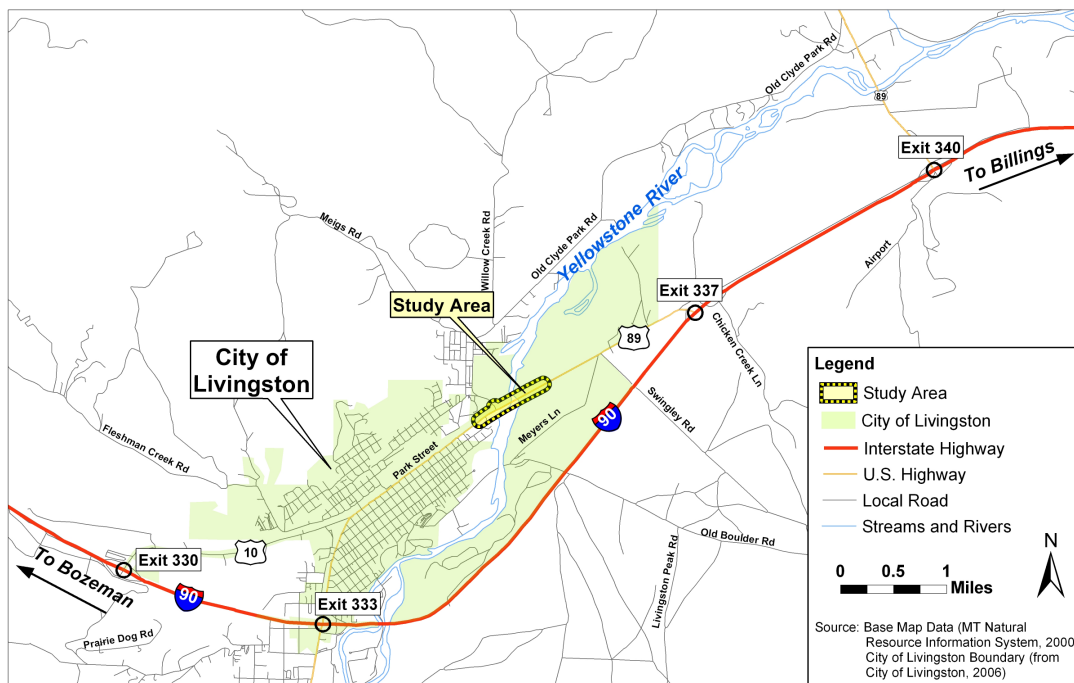
Interstate Access

The Yellowstone River Bridge on US 89 provides one of Livingston's three accesses to Interstate 90 (Figure 3.1). US 89 connects to I-90 northeast of the city at Exit 337. Near the southern city limits, US 89 connects to I-90 at Exit 333, which functions as the primary access to Livingston. The vast majority of traveler services, including fast food restaurants, gas stations, and the visitor's center are located at this access. The third access to I-90 is Exit 330 via US 10, west of the city limits.

Local Access

Within the project area, there is one road (Bennett Street) that connects with US 89, three private accesses, and two informal Yellowstone River recreational accesses, none of which currently have turn lanes associated with them. Bennett Street connects with US 89 from the north on the west side of the Yellowstone River and primarily serves an industrial area on the north side of the MRL railroad tracks, including the city maintenance shop and wastewater treatment facility (Figure 1.2).

Figure 3.1 City of Livingston – Access to Interstate 90



There are three private accesses located on the south side of US 89 west of the Yellowstone River: the KPRK radio station, the Rainbow Motel, and Krohne Antiques (Figure 1.2). The Rainbow Motel and the KPRK Radio Station share an unpaved access road that runs roughly parallel to US 89 adjacent to these properties. In addition, there are two informal recreational accesses located at the southwest and southeast corners of the bridge (Figure 1.2). The informal access located at the southwest corner is a wide turnout that provides space for approximately six vehicles to park just off the road. The informal access located at the southeast corner is a field access road on which vehicles park. This access is located within an existing area of MDT access control.

Traffic

US 89 serves as the eastern entrance to the City of Livingston and provides access to the City linking tourism and commercial traffic traveling on I-90. US 89 through Livingston also serves as a detour route for I-90 traffic during occasional I-90 closures. Table 3.1 shows the present, 2010, and 2030 average daily traffic (ADT) volumes. MDT used an average growth rate of 1.4 percent per year to forecast traffic volumes for the year 2030. Near the end of 2006, the City of Livingston annexed approximately 662 hectares (ha) [1636 acres (ac)] of land on the east side of the Yellowstone River. The City anticipates residential, commercial, and industrial development on this land. The traffic projections in Table 3.1 do not reflect the traffic volumes along US 89 that might occur if or when the newly annexed land is developed. However, the potential for cumulative impacts related to anticipated development east of the Yellowstone River is discussed in Section 3.6.

Table 3.1 Average Daily Traffic Volume

US 89	2006 ADT	2010 ADT	2030 ADT
West of Bennett St	6,050	6,400	8,450
East of Bennett St	2,690	2,840	3,750

Source: email communication (MDT 2007)

Bennett Street is located just west of the bridge (Figure 1.5). The intersection of Bennett Street and US 89 is a Y-shaped intersection. Both legs of the intersection incorporate two-way traffic and also function as storage areas for vehicles turning off of US 89 and waiting for trains to clear the railroad tracks. The Bennett Street railroad crossing is at the east end of the MRL switchyard. Because of this, long delays caused by trains can occur for traffic waiting to cross the tracks. Traffic waiting for trains to clear wait in both legs of the Bennett Street intersection and in some cases in the Rainbow Motel parking lot located opposite and west of the intersection.

A capacity analysis of the Bennett Street intersection indicates that the Bennett Street approach is currently operating with a level of service (LOS) B and is expected to operate at LOS B in the 20-year planning horizon without the installation of turn bays or any changes to traffic control on Bennett Street (MDT 2004). LOS for an intersection is determined by the computed or measured control delay and is defined for each minor movement (HCM 2002). LOS is defined as A to F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions and the driver's perception of those conditions. Safety is not included in the measures that establish service levels.

Impacts

No-Build Alternative

Under the No-Build Alternative, the Yellowstone River Bridge and corresponding roadway approaches to the bridge, including the US 89/Bennett Street intersection, would not be reconstructed and no access points would be created or eliminated in the project area. The No-Build Alternative would continue to impact access and traffic in the project area. Access to Livingston, Bennett Street, and three private properties would continue; however, vehicles would continue to park along US 89 when the southwest parking area is full. Traffic would also continue to queue behind vehicles waiting to turn left onto Bennett Street from US 89 and while waiting for the train to clear the railroad tracks across Bennett Street.

Build Alternatives

The impacts to access would be the same under both Alternative 1 and Alternative 2. The proposed improvements under the Build Alternatives would not eliminate access points within the project area. Existing property access, including the field access road located southeast of the bridge and within the existing access control area, would be perpetuated. The access to two private properties may be reconfigured. It would be MDT's preference to reconfigure the shared access to the Rainbow Motel and the KPRK Radio Station as two separate accesses oriented perpendicular to US 89. This access reconfiguration would be determined during final design and be dependant on ROW negotiations with the property owners.

If the proposed parking areas are implemented, a new access for each of those facilities would be established. Implementation of the parking area southeast of the bridge may require a modification to the existing access control limits in the project area.

The impacts to traffic would be the same under both Alternative 1 and Alternative 2. The US 89/Bennett Street intersection would be reconfigured under both of the Build Alternatives. The Y-intersection would be replaced with a new T-intersection to address safety concerns related to this intersection. Because the intersection would continue to be at the same grade as the railroad tracks, vehicles would still be required to wait for trains when turning left onto Bennett Street. It is anticipated that the LOS on Bennett Street at this intersection would continue to operate at LOS B with these improvements. However, as described above, traffic operations at this intersection would continue to be adversely affected when trains are crossing Bennett Street.

The addition of a left-turn lane on eastbound US 89 at Bennett Street would improve traffic flow on US 89 by creating a specific lane for deceleration, storage, and turn initiation, thereby removing turning vehicles from the travel lane. In addition, the widening of the Yellowstone River Bridge would improve traffic flow by providing more room for oversized opposing vehicles to pass while traveling on the bridge; therefore, reducing the need to slow down or wait for adequate room to pass.

This overall increase in travel efficiency achieved by implementing the proposed improvements would have a beneficial effect on traffic flow through the project area. Additionally, during I-90 closures, the improved traffic flow would better accommodate the additional traffic detoured from the interstate.

Temporary impacts related to construction would occur and are discussed in Section 3.5. The potential for cumulative traffic impacts related to anticipated development east of the Yellowstone River is discussed in Section 3.6.

Mitigation

No adverse traffic or access impacts would result from either of the Build Alternatives; therefore, no mitigation would be required.

3.2.2 Safety

As highlighted in the Purpose and Need section in this EA, improving safety is one of the primary goals of this project. The travel lanes on the existing bridge do not currently meet MDT standards for a non-NHS primary route in a transitional rural to urban area. The narrow travel lanes and lack of shoulders on the bridge do not provide adequate room for opposing vehicles to pass safely when wide-load vehicles are traveling on the bridge. This results in potential sideswipe-opposite direction crashes. In addition, there is poor sight distance to the Y-intersection with Bennett Street, which is located directly west of the bridge. The poor sight distance between the Bennett Street intersection and the bridge creates safety concerns for vehicles entering and exiting the intersection.

Also, the absence of a left turn lane on US 89 at Bennett Street leaves slow or stopped vehicles in the travel lane as they turn left from US 89 onto Bennett Street. Currently, vehicles waiting for trains to clear before proceeding north on Bennett Street across the train tracks must wait in the travel lanes of the Y-intersection or in the US 89 travel lanes. If the vehicle queue exceeds this capacity, vehicles must use the parking areas of the adjacent commercial development. Injury crashes involving rear end collisions with left turning vehicles onto Bennett Street from US 89 have been recorded at this intersection (Table 3.2).

There were 30 reported crashes within the project area between January 1, 1997 and December 31, 2006 (MDT 2007). None of these crashes involved fatalities, but 14 involved injuries. As shown in Table 3.2, five of the recorded crashes occurred on the bridge and ten occurred at the intersection with Bennett Street. The other 15 recorded crashes occurred on the roadway approaches to the bridge.

Table 3.2 Crash Summary (January 1, 1997 – December 31, 2006)

Location	Number of Crashes: Total	Crash Characteristics
Yellowstone River Bridge	5 total	2 crashes were single vehicle collisions with bridge rail 3 crashes involved vehicle sideswipe collisions
US 89/Bennett Street Intersection	10 total	4 crashes were rear end crashes 5 crashes were single-vehicle off-road crashes 1 crash involved a pickup/trailer jackknife at the railroad crossing

Source: Engineering Study Evaluation (MDT 2007)

Table 3.3 summarizes accident rates for all vehicles and trucks in the project area as compared with the statewide average for rural State Primary routes. The crash rate in the project area is more than double the statewide average.

Table 3.3 Crash and Severity Rates (January 1, 1997 – December 31, 2006)

	Statewide Average for Rural State Primary	Project Corridor
Vehicle Crash Rate ¹	1.40	3.25
Vehicle Severity Index ²	2.35	2.10
Vehicle Severity Rate ³	3.29	6.83

Notes:

1. Crash rate is defined as the number of crashes per million vehicle-miles.

2. Severity index is defined as the ratio of the sum of fatal and incapacitating injury crashes times 8, plus the number of other injury crashes times 3, plus the number of property damage crashes compared to the total number of crashes.

3. Severity rate is defined as the crash rate multiplied by the severity index.

Source: Engineering Study Evaluation (MDT 2007)

Impacts

No-Build Alternative

The No-Build Alternative would have no effect on crashes in the project area. The current accident and severity rates, which are higher than the statewide average, would likely continue.

Build Alternatives

Both Alternative 1 and Alternative 2 incorporate recommended safety improvements and the impacts to safety would be the same under both of these alternatives. The Build Alternatives provide for improved safety and an opportunity to decrease accident rates by widening the Yellowstone River Bridge and improving roadway approaches including the US 89/Bennett Street intersection. Widening the travel lanes and adding shoulders on the bridge and widening the shoulders on the corresponding approaches to the bridge would improve safety by providing more room for opposing vehicles to pass while traveling on the bridge. The crest vertical curve that would be implemented in the bridge design would improve safety by increasing the sight distance between the Bennett Street intersection and the bridge.

The proposed improvements to the US 89/Bennett Street intersection would improve safety by providing a left-turn lane for eastbound traffic. This would provide a storage area and deceleration lane for vehicles turning left from US 89 onto Bennett Street and a storage area for vehicles waiting for trains to pass. The addition of a new left turn lane is anticipated to reduce the number of rear-end accidents occurring at this location.

Mitigation

No adverse safety impacts would result from either of the Build Alternatives; therefore, no mitigation would be required.

3.2.3 Pedestrians and Bicycles

The City of Livingston currently has no pedestrian network linking the Yellowstone River Bridge to the town. No formal pedestrian/bicycle facilities exist in the project area.

A pedestrian and bicycle (multi-use) network, which would connect the eastern and western portions of the town as well as the area along the Yellowstone River, is proposed in the *Urban Design Framework Master Plan*. The Plan, prepared for Livingston in 2002, identifies US 89 (Park Street) as a multi-modal gateway to the community. The Yellowstone River Bridge is identified as a gateway feature complete with multi-use facilities separated from the roadway.

The Livingston City Commission and the Park County Commission appointed a Trails and Greenways Task Force, which convened in January of 2005. Its mission is “to undertake a study and to develop a trails and greenways system for the City of Livingston and the area immediately surrounding the city.” MDT staff met with the Task Force on March 9, 2006 to discuss the objectives of the Task Force and how this project might accommodate trails planned in and around the project area. As documented in the *Livingston/Park County Trails Plan*, planned trails in proximity to the project area include trails along each side of the Yellowstone River and a trail along US 89 from Livingston and across the highway bridge.

Impacts

No-Build Alternative

Under the No-Build Alternative, the Yellowstone River Bridge and corresponding roadway approaches would not be reconstructed. The No-Build Alternative would not accommodate the pedestrian elements proposed in the 2002 *Urban Design Framework Master Plan* or by the Trails and Greenways Task Force. Concerns regarding pedestrians and bicyclists ability to use the bridge would remain because of the lack of pedestrian/bicycle facilities, the narrow travel lanes and lack of shoulders on the bridge, and the narrow shoulders on the roadway approaches. Additionally, the current bridge structure would not accommodate a multi-use path underneath the bridge on either side of the river.

Build Alternatives

Both of the Build Alternatives would provide the same improvements to pedestrian/bicycle access on the Yellowstone River Bridge and the corresponding roadway approaches as well as along the Yellowstone River underneath the bridge.

Under both Build Alternatives, the installation of a 3-m (10-ft) wide multi-use path on the south side of the new bridge deck, separated from traffic by traffic railing, would improve the ability of pedestrians and bicyclists to safely use the bridge. This separated multi-use path would extend from the bridge ends on each side of the river along the south side of US 89 east and west of the bridge. Potential conflicts with fast-moving vehicles would be reduced and safety improved because of the separation of pedestrians/bicyclists from motor vehicle traffic when traveling on the bridge and roadway.

As discussed in Section 2.2.2, MDT is considering two types of traffic railing on the bridge. If the railing is mounted on a curb, the curb would prevent drainage and debris from the roadway from flowing onto the multi-use path and would provide a continuous brush curb for pedestrians along the traffic rail. A rail mounted flush with the top of the deck would not provide these benefits.

The construction of a multi-use path across the bridge and accommodation for multi-use paths under the bridge would also be consistent with the recommendations from the 2002 *Urban Design Framework Master Plan* and the 2006 *Livingston/Park County Trails Plan*. Both of the Build Alternatives would accommodate the desired multi-use network identified in the Master Plan and the

Trails Plan, including separated multi-use facilities across the bridge and space for multi-use connections beneath the bridge along the Yellowstone River.

Mitigation

No adverse pedestrian and bicycle impacts would result from either of the Build Alternatives; therefore, no mitigation would be required.

3.2.4 Parking

Informal parking for fishing and recreational access in the form of a wide turnout is currently available 45 m (148 ft) off the southwest corner of the existing bridge. The parking capacity for this informal area is approximately six vehicles. Vehicles use this area frequently and also park on the adjacent roadside when the turnout is full. Due to narrow shoulders and sloping terrain along US 89, vehicles that park on the side of the road encroach into the eastbound travel lane of US 89. An access road with informal parking is also available off the southeast corner of the existing bridge.

Impacts

No-Build Alternative

Under the No-Build Alternative, the Yellowstone River Bridge and corresponding roadway approaches would not be reconstructed. The two informal parking areas currently used to access the river for fishing and recreational activities (located near the southwest and southeast corners of the bridge) would remain unchanged. When the parking areas are full, vehicles would continue to park along the roadside of US 89. Traffic at the Bennett Street intersection would also continue to be disrupted due to close proximity of the bridge to the intersection and lack of adequate parking area in this location.

Build Alternatives

The impacts to parking would be the same under both Build Alternatives. Access to the two informal parking areas currently used to access the river for fishing and recreational activities (located near the southwest and southeast corners of the bridge) would no longer be available due to the required traffic railing of the longer bridge design. Because current use of these areas for parking is informal, this change in access is not considered a removal of existing parking in the project area. If funding and ROW are available, MDT would consider constructing formal designated gravel parking lots on the southeast and southwest approaches of the bridge. The potential to provide formal parking areas at these locations with increased parking capacity could reduce the occurrence of vehicles parked along the roadside of US 89.

Mitigation

No adverse parking impacts would result from either of the Build Alternatives; therefore, no mitigation would be required.

3.3 EFFECTS ON THE COMMUNITY

This section describes the existing and future social and economic conditions in the proposed project corridor. Resources affected by the proposed project would include businesses and land uses adjacent to and dependent on roadway access, as well as the broader community of Livingston.

3.3.1 Community Resources

Population

Park County is Montana's 12th most populous county with 15,694 residents, according to the 2000 Census. Between 1990 and 2000, Park County grew nearly eight percent, as compared with about 12 percent for the state as a whole. The County's population increase is primarily due to in-migration, which accounted for 2/3 of the population gain between 1990 and 2000. More recently, the US Census estimated that the population gain between April 1, 2000 and July 1, 2002 was entirely due to in-migration. The population clusters in the County, including the incorporated Cities of Livingston and Clyde Park, exist primarily along US 89. The project area, which is rural in nature, is directly northeast of the City of Livingston, the state's 11th largest city with a population of 6,851.

Schools

The project area is within the Livingston School District, which consists of two separate legal entities. School District #4 is an elementary district for grades K-8 and consists of two elementary schools and one middle school. Park High School is designated District #1 and serves grades 9-12. Park County also has one private Catholic school for grades K-8. No public or private schools are located in proximity to the project area, but two school bus routes cross the bridge (Table 3.4). Additionally, area schools conduct approximately 250 activity trips per year, about half of which require travel over the bridge.

Table 3.4 School Bus Traffic on Livingston Bridge

Direction	Time
Springdale Route	
East	6:30 AM
West	7:30 AM
East	3:45 PM
West	4:45 PM
Shields River Route	
East	7:00 AM
East	4:20 PM

Source: Livingston School District, 2006

Churches/Synagogues

No churches or synagogues are located in the project area.

Emergency Services

Emergency response for Livingston residents is provided by the City of Livingston emergency services, which includes police, fire, and ambulance. The Livingston Police Department has 14 full-time police officers on staff to provide 24-hour patrol services to the community. Sheriff services in unincorporated areas are provided by Park County, which is headquartered in Livingston. Fire & Rescue has 15 full-time firefighters and 14 part-time reserve firefighters on staff. They provide fire and advanced life support ambulance services 24 hours a day, seven days a week in Livingston and throughout Park County. Fire & Rescue staff currently includes five paramedics and three swift water rescue instructors.

Hospitals

Livingston Memorial Hospital, a non-profit community hospital, is the largest medical facility in Livingston. The hospital is located approximately 2.9 km (2 mi) southwest of Livingston and serves residents of Park and Sweetgrass Counties. The hospital provides inpatient and outpatient services, 24-hour emergency services, and advanced life support. Emergency helicopter service is also provided through the Livingston Memorial Hospital Heliport. Livingston also has several medical clinics, a rehabilitation center, home health care, and a hospice that provide medical services to the residents of Park County and surrounding communities.

Parks or Recreational Facilities

The City of Livingston has approximately eight existing parks; however, none of the City's eight existing parks is located near the project area. Park County offers a wide variety of sites and outdoor activities including hunting, fishing, whitewater rafting, cross country skiing, swimming in hot springs, horseback riding, and camping trips.

The Yellowstone River flows through the project area under the Yellowstone River Bridge offering fishing and whitewater rafting opportunities. Although the project area does not provide a formal fishing access site (see the 2003 Montana Department of Natural Resources and Conservation [MDNRC] letter in Appendix F), the public uses the bridge area to access the river.

Based on discussions with the local angling community, the section of the Yellowstone River that passes through the project area is floated year-round, and numerous boats float through the project area each day during the summer months. The Annual Yellowstone Boat Float also takes place in the project area. The first Friday after the 4th of July, approximately 40 boats line up on the shore at Mayor's Landing and launch all at once. Mayor's Landing is located approximately 1 km (0.6 mi) upstream of the highway bridge.

There is an informal parking area for fishing and recreational access in the form of a wide turnout 45 m (148 ft) off the southwest corner of the existing bridge. An access road with parking is located off the southeast corner of the existing bridge. Informal foot paths connect to US 89 on the southwest and southeast sides of the bridge providing pedestrian access to the Yellowstone River.

Impacts

No-Build Alternative

Under the No-Build Alternative, access to community facilities and recreation areas would be unchanged. Perpetuation of current roadway and bridge conditions in the project area could exacerbate safety concerns for drivers and river users and delay emergency response as traffic volumes increase. Impacts related to traffic, access, and safety would persist and are discussed in Sections 3.2.1 and 3.2.2.

Under the No-Build Alternative, existing conditions in the project area would continue to pose safety concerns for floaters. This is because the bend in the river upstream of the highway bridge does not leave floaters with much time to set up as they approach the roadway and railroad bridges. Also, the number of piers in the water and the strong currents in this section contribute to accidents each year in which floaters hit one of the piers and are upended and trapped.

Build Alternatives

The proposed project is not expected to have any adverse effects on emergency services in the City of Livingston or Park County. Emergency response outside the city limits would likely enter or exit the City from the southern access at I-90 (Exit 333) as Livingston Memorial Hospital is located approximately 1.2 km (0.75 mi) from Exit 333. Improved roadway conditions and increased shoulder width on the bridge would allow vehicles to move to the shoulder so emergency vehicles can pass. This may result in reduced travel times for emergency response. Access for emergency services and school buses would be impacted during the construction period for both Build Alternatives. These impacts are discussed in section 3.5.

The Build Alternatives may have a minor beneficial impact for recreational users of the river. Both Build Alternatives would maintain the existing clearance for floaters and possibly provide additional floater clearance under the center span of the new bridge. Both Build Alternatives would have one less bridge pier in the river for floaters to maneuver around. However, because the proposed bridge would be more than twice the width of the existing bridge, the bridge piers would be larger than the existing piers. As channel migration occurs over time, the safety of floaters would be better served by Alternative 1 because the single shaft piers would minimize debris accumulation over time as compared with the double shaft piers (see Figures 2.5 and 2.11 in the Alternatives Chapter). Therefore, in the long term, Alternative 1 would provide the least impediment to floaters passing underneath the bridge.

Informal pedestrian access to the river from the roadway for fishing and other recreational activities would continue to be provided. The space that would be provided for future construction of multi-use paths below the bridge on the both sides of the river would also provide improved access to the river for fishing and other recreational activities.

Recreational access to the river within the project area would be impacted during construction and those temporary impacts are discussed in Section 3.5.

Mitigation

No permanent adverse impacts to community resources would result from either of the Build Alternatives; therefore, no mitigation would be required.

3.3.2 Local and Regional Economics

The railroad, mining, and agriculture industries played important roles in establishing the Livingston area in the mid to late 1800s. Until the mid 1980s, the economy of Livingston and the rest of the County was based on the transportation industry, mainly the railroad and associated enterprises. When Burlington Northern Railroad pulled out of its rebuild/remanufacturing facility in Livingston in 1986, the economy of the county restructured to a tourism and service-based economy. Throughout this economic transition, agriculture has remained an important factor in the County's economy. As the county seat and urban center of Park County, Livingston provides commercial and retail services to support the farming and ranching interests in the County.

Three local businesses are located in the project area. The Rainbow Motel, the KPRK Radio Station, and Krohne Antiques store are located along the south side of US 89 on the west side of the bridge.

Recreational users of the area are an important component of the Livingston economy. The section of the Yellowstone River bordering Livingston is a popular recreation area and receives heavy use by

wading and boating fishermen, as well as seasonal use by rafters, tubers, and other watercraft users. Outfitters in Livingston, Bozeman, Gardiner, Big Timber, Billings, Butte, and Idaho Falls fish the Yellowstone River near Livingston.

Impacts

No-Build Alternative

The No-Build Alternative would not affect local or regional economics.

Build Alternatives

Both of the Build Alternatives would improve access to the businesses in the corridor by improving traffic flow along US 89 in the project area and improving traffic operations at the Bennett Street intersection.

Both Build Alternatives may have minor safety benefits for boats and rafts navigating through the project area underneath the bridge due to one less pier in the water. These benefits would be minor because the piers would be larger to support the wider bridge deck proposed under the Build Alternatives. River outfitters would benefit from the improved safety more so under Alternative 1, which offers the optimum long-term hydraulic performance.

The construction costs for Alternative 1 are estimated at 9.8 million dollars (estimated August 2006). The construction costs for Alternative 2 are estimated to be between 10 and 20 percent higher due to the phased construction.

Temporary impacts related to construction would occur under the Build Alternatives and are discussed in Section 3.5

Mitigation

No permanent adverse impacts to local or regional economics would result from either of the Build Alternatives; therefore, no mitigation would be required.

3.3.3 Land Use and Local Plans

As discussed in Section 1.1.1, the proposed bridge replacement project spans the Yellowstone River in Park County in the northeast area of the City of Livingston (See Figures 1.1 and 1.2). The project location is in a transition area connecting the Livingston urban area to the adjacent rural area of Park County. The City and County have produced a number of planning documents that apply to land use in the project area. These include the following:

- *Park County Comprehensive Plan*
The Plan was approved in March 1998 and sets goals and objectives for land use within the planning district.
- *Livingston Area Comprehensive Plan*
The Plan was prepared jointly by the City and County and approved in March 1995 with the purpose of developing land use policies for the area and giving the governing body a basis for sound development decisions.

- *Urban Design Framework Master Plan*
The Plan was approved in September 2002 and is intended to articulate the community's vision for future development and growth.
- *2006 Park County Growth Policy*
The Plan was approved in October 2006 with the purpose of providing guidance for subdivision regulations and a framework for continued planning efforts in Park County.
- *Livingston/Park County Trails Plan*
The Plan was approved in November 2006 and documents the trails and greenways proposed for the City of Livingston and the surrounding area.

City and County Land Use

Nearly half (49.4%) of the land in Park County is managed by the U.S. Forest Service (USFS). Another 47.3 percent is privately owned with the remainder owned by a variety of government agencies and conservation easements (<http://nris.state.mt.us/>). The majority of land in the County is undeveloped, but The City of Livingston is highly developed, and the area surrounding the city is the fastest growing portion of Park County.

Impacts

No-Build Alternative

The No-Build Alternative would not affect land use in the project area. It would not provide an opportunity to implement the recommendations of the local plans.

Build Alternatives

The primary land use changes related to the Build Alternatives would be the change from roadway-adjacent agricultural and vacant land to transportation and/or recreation uses (multi-use path) within the proposed roadway ROW and/or easements.

The Build Alternatives are consistent with the above mentioned plans with one exception. The *Urban Design Framework Master Plan* recommends that the speed limit on the bridge be established at 25 mph to ensure pedestrian and bicycle safety. As discussed in Section 2.4, an analysis of speed changes for this section of US 89 would have to be determined by a separate study after this project is completed.

The Plan also recommended installing public observation points and plazas and public art at the termini of the bridge. The Build Alternatives would not preclude these options if the City elects to pursue them.

Mitigation

No adverse land use impacts were identified for the Build Alternatives. Consequently, no mitigation is necessary.

3.3.4 Right-of-Way and Relocations

The existing highway ROW in the project area is approximately 48.8 m (160 ft) and includes an easement along the north side from the MRL, which runs parallel to the highway.

Impacts

No-Build Alternative

No additional right-of-way, easements, or building relocations or acquisitions would be needed for the No-Build Alternative.

Build Alternatives

Additional right-of-way and/or easements would be required from three parcels in the project area under both of the Build Alternatives. The alignment would shift slightly north and may require negotiations with MRL for a new easement. ROW would also be required from two private parcels to accommodate the two gravel parking areas proposed as enhancements under both Build Alternatives. The 2.5-ha (6-ac) private parcel on the southwest side of the bridge is vacant land from which approximately 0.08 ha (0.2 ac) of ROW would be required for a proposed parking area. The 33.2-ha (82-ac) private parcel on the southeast side of the bridge is agricultural land from which approximately 0.2 ha (0.4 ac) of ROW would be required for a proposed parking area. These parking areas would only be constructed with this project if funding and ROW are available.

Mitigation

Acquisition of land, and improvements, for highway construction is governed by state and federal laws and regulations that are designed to protect both the landowners and the taxpaying public. Landowners affected are entitled to receive just compensation for any land or improvements acquired and for any depreciation in value of the remaining land due to the effects of highway construction pursuant to Montana law. Acquisition will be accomplished in accordance with applicable laws; specifically, Title 60, Chapter 4 and Title 70, Chapter 30, Montana Code Annotated; and Title 42, U.S.C., Chapter 61, "Uniform Relocation Assistance And Real Property Acquisition Policies For Federal And Federally Assisted Programs."

3.3.5 Utilities

This section describes the parts of the utility system that lie within the project area. Additional utility information may be identified during design and would be incorporated into the final design.

City sanitary sewer lines exist north of the west approach and also cross the highway from the south and head toward the municipal wastewater treatment plant northwest of the project area.

Currently, no utilities cross the highway bridge. The City of Livingston has requested accommodations for a 12-inch sewer line and a 12-inch water line across the new bridge. The City has also received an application from a private developer to connect to the City's water and sewer system to serve development planned for the east side of the river.

Impacts

No-Build Alternative

No impacts to utilities would occur under the No-Build Alternative.

Build Alternatives

No adverse impacts to utilities would occur under either of the Build Alternatives. Although no agreements have been reached between the City and MDT regarding utilities on the bridge, both of the alternatives could accommodate water and sewer lines on the bridge as per the City's request. If the City would like to extend utilities across the bridge, they will need to submit a MDT Structure Encroachment Permit to MDT.

Mitigation

In accordance with MDT Standard Specifications, utility companies will be contacted, if necessary, to coordinate activities to avoid or minimize disruption to service.

3.3.6 Contaminated Sites/Hazardous Materials

An Initial Site Assessment (ISA) and Preliminary Site Assessment (PSI) of the Yellowstone Bridge NE of Livingston project area were completed in 2003. The *Hazardous Materials and Water Quality Report* (May 2003) was prepared by Hyalite Environmental based on these investigations and is on file with MDT. The findings of this report are summarized in this section.

No sites with Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (Federal Superfund) status were identified within one mile of the proposed project area. No Resource Conservation and Recovery Act (RCRA) treatment, storage, or disposal (TSD) facilities or Solid Waste Landfills (SWLFs) were identified within one-half mile of the proposed project area. Six leaking underground storage tank (LUST) sites and ten underground storage tank (UST) sites were identified within 0.8 km (0.5 mi) of the proposed project area. The presence of a volatile organic compound (VOC) ground water plume originating from the Burlington Northern Livingston Shop Complex (BNLSC) Comprehensive Environmental Cleanup and Responsibility Act (CECRA) (Montana State Superfund) site was identified within 1.6 km (1 mi) of the project area. The plume extends throughout the location of the proposed project area (Hyalite Environmental 2003).

The BNLSC site was proposed for the National Priorities List in April 1994 on the basis of the evaluation of risk to human health and the environment associated with the ground water exposure pathway (Federal Register Notice, Vol. 59, No. 162, August 23, 1994). The Montana Governor did not request placement of the site on the list, which is the next administrative requirement that must be met to formalize a CERCLA site. Therefore, the BNLSC site is not a CERCLA site.

The BNLSC site is classified as a CECRA, or Montana State Superfund site, ranked maximum priority. More than 100 years of railroad waste treatment, storage, and disposal practices contaminated the soils and the Livingston aquifer, which is the alluvial aquifer (EPA 2003). It has not been determined at this time if the plume extends down into the bedrock aquifer, which lies beneath the alluvial aquifer and can be as shallow as 5.5 m (18 ft) beneath the Yellowstone River (Montana Department of Environmental Quality [MDEQ] 2007). In 2003, MDEQ documented the approximate size and boundaries of the site as being approximately 2.4 km (1.5 mi) long and 0.40 km (0.25 mi) wide and generally bounded by Park Street on the south, Gallatin Street on the north, Fifth Street on the west, and beyond the Yellowstone River on the east (MDEQ 2003a). MDEQ performed additional investigations in the area of the project in the spring of 2007. MDEQ has not yet released a report regarding their findings, but preliminary data indicate that the current extent of the plume extends as far south as Lewis Street and beyond the east bank of the Yellowstone River. Although Burlington Northern Railroad is the primary responsible party for the site, other parties (MRL, the Church

Universal and Triumphant, Livingston Rebuild Center, and Talgo Livingston Rebuild Center) have leased portions of the site and performed operations using hazardous wastes as well.

The Strongs Post Yard is also a CECRA site located within 1.6 km (1 mi) of the proposed project site, near the intersection of North N Street and Bennett Street. This site has been ranked low priority by the Montana Department of Environmental Quality (MDEQ). Wood treating may or may not have occurred at this location (a portion of the site is located 7.2 km (4.5 mi) northwest of Livingston, and was likely the site of wood treatment). A 1987 CERCLA preliminary assessment by the Montana Department of Health and Environmental Sciences noted the potential for contamination due to the use of pentachlorophenol (PCP), but in 1991 US Environmental Protection Agency contractors ranked the facility “no further action” under CERCLA. According to the MDEQ site summary sheet for the facility, additional site history and sampling may be needed before the facility can be considered for de-listing (MDEQ 2003b).

Of the six identified LUST sites, only three are relevant to the proposed project area. These three LUST sites have been superseded by the BNLSC CECRA site. Burlington Northern has removed all LUSTs (sources) and contaminated soils with concentrations of constituents of concern above risk-based site cleanup levels that have been located to date (MDEQ 2001). The remaining ground water plumes, which have extended to the Yellowstone River and east of the Yellowstone River, are being remediated through the combination of source removal and monitored natural attenuation (MDEQ 2001). LUSTs with confirmed releases from operations subsequent to Burlington Northern’s operations have been removed and the contaminated soils were excavated down to the pre-existing BNLSC ground water plumes (Hammer, personal communication, 2003; Kuhn, personal communication, 2003).

Of the ten sites identified in the MDEQ LUST database, all are inactive and eight have been removed (Montana Travertine, personal communication, 2003). These eight removed tanks are on the Rustad Ranch industrial park facility currently occupied by Big Sky Heavy Equipment Repair, Concrete Materials of Montana, Myrstol Post and Pole, RG Lumber, and Montana Travertine, as well as remaining ranch operations of the Rustad family. The remaining two sites (inactive) are at the City Street Maintenance Shop directly northwest of the project area.

The girders of the existing bridge have likely been painted with lead-based paint. The Occupational Safety and Health Administration (OSHA) standard for lead regulates disturbance of any painted surface with a detectable level of lead. The OSHA standard requires worker protection and personal monitoring of exposure limits during demolition. The lead-containing debris can be disposed of at any approved solid waste handling facility.

Impacts

No-Build Alternative

There would be no impact related to hazardous materials and/or contaminated sites under the No-Build Alternative.

Build Alternatives

The findings of the PSI indicate the presence of a VOC ground water plume originating from the BNLSC site. It is not anticipated that the proposed project would affect the concentration of VOCs or the flow of the plume. Construction related concerns have been identified and are discussed in Section 3.5.

USTs and LUSTs are within 0.7 km (0.5 mi) of the proposed project site, but impacts related to those USTs and LUSTs are unlikely to affect the proposed project.

Mitigation

In accordance with MDT Standard Specifications, if contaminated soils or hazardous materials are encountered, excavation and disposal will be handled in compliance with applicable federal, state, and local regulations.

Because the VOC ground water plume extends throughout the project area, additional subsurface sampling and analyses of soils may be warranted to more precisely determine the extent and scale of contamination. In May 2007, MDT and MDEQ reached agreement on a geotechnical drilling and waste management work plan to be implemented for this project.

3.3.7 Cultural/Archaeological/Historical Resources

Historic and cultural resources are defined in Section 301 of the National Historic Preservation Act (NHPA) of 1966, as amended, as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places (NRHP) [16 USC 470W].” Cultural resources are determined for listing on the NRHP through consideration of established criteria. In order to be eligible for listing on the NRHP, the property in question must be important in American history, architecture, archaeology, engineering, or culture and possess integrity of location, design, setting, materials, workmanship, feeling, and association. In addition, properties must meet at least one of the following criteria:

- A. Association with events that have made a significant contribution to the broad patterns of the area’s history.
- B. Association with the lives of persons significant in the area’s past.
- C. Embodiment of distinctive characteristics of a type, period, or method of construction, or representation of the work of a master, or possession of high artistic values, or representation of a significant distinguishable entity whose components may lack individual distinction.
- D. Has yielded, or may be likely to yield, information important in prehistory or history.

Generally, properties must be 50 years or older to be eligible for the NRHP.

In compliance with federal guidelines, including Section 106 and 110 of the (36 CFR 800), a cultural resource survey was conducted in the project area in order to identify resources listed on or eligible for listing on the NRHP. The cultural resource inventory was completed in 2003 (Ethnoscience, Inc., May 2003). The survey encompassed a 1.6 km (1.0 mi) length and a 122 m (400 ft) width. Four 30 m (98.4 ft) pedestrian transects were employed to identify cultural properties within the designated project corridor.

A total of four historic sites were identified within the project inventory corridor, three of which are previously recorded sites and one newly recorded site. Of these four historic sites, one has been listed on the NRHP since 1979. Three sites are eligible for inclusion in the NRHP. No traditional cultural properties, prehistoric sites, or isolated finds were identified during the survey.

The NRHP-eligible sites are shown on the Environmental Overview map in Appendix A and a list of all sites inventoried is presented in Appendix C. The description and recommendation criteria for each NRHP-eligible site are included with the site name in Table 3.5. The State Historic Preservation

Office (SHPO) was consulted and concurred with the findings regarding the NRHP eligibility of these sites (See Appendix C).

Table 3.5 Cultural Inventory of NRHP-Eligible Sites in Project Area

Name Of Cultural Site	Description	NRHP Status
KPRK Radio Station Site 24PA988	Previously recorded site. This 6x15 m (20x50 ft) radio station was built in 1947 in the <i>Modern</i> architectural style and has always served as a radio station. There have been no significant changes to the overall integrity of this site since its listing on the NRHP in 1979.	Listed in 1979 under Criterion C
Yellowstone River Highway Bridge Site 24PA1078 Update	Previously recorded site with update. This automobile bridge is a five-span steel girder and floor beam structure resting on reinforced concrete abutments and four piers.	Eligible under Criteria A and C (The Yellowstone River Highway Bridge is not included on MDT's Roads and Bridges Historic Preservation Plan)
Railroad Grade and Railroad Bridge Site 24PA1120 Update	Previously recorded site with update to include bridge. This section of the Northern Pacific Railway was constructed in 1882. Integrity of grade is excellent. The current railroad bridge was built in 1918. It is a two span Warren Truss railroad bridge. Integrity is excellent. The railroad is significant to the development of this area of Montana for employment, transport, and tourism.	Eligible under Criteria A and C
The Rainbow Motel Site 24PA1185	Newly recorded site, 2003. This site consists of five wood-framed, one-story buildings, totaling 621 sq. meters (6,682 sq ft). A portion of this site is within existing MDT ROW. Feature 1 is the motel office/owner residence. Feature 2 contains eight motel units. Feature 3 contains four motel units. Feature 4 contains seven motel units. Feature 5 is the laundry/storage building. All buildings were constructed on concrete pad foundations in 1947, except Feature 3, constructed in 1952. The construction of the motel is associated with the post-World War II tourism boom and car culture, as well as the transition era from hotels to roadside motels. The site has functioned as a motel since its construction and retains sufficient integrity despite two renovations.	Eligible under Criteria A and C

Impacts

Section 106 of the NHPA requires MDT to identify NRHP-eligible cultural resources within the project area and then to determine the effects of the proposed project on NRHP-listed or -eligible cultural resources. For each of the four resources within the area of potential effect (APE), FHWA and MDT have determined whether the alternatives would have No Effect, No Adverse Effect, or Adverse Effect. SHPO has reviewed and concurred with the determinations for the Build Alternatives (see Appendix C).

MDT has a Programmatic Agreement (PA) for Historic Roads and Bridges (signed in 1989 and amended in 1992 and 2007), which applies to the Yellowstone River Highway Bridge and provides standardized mitigation for impacts to historic highway bridges (see Appendix C).

Because the construction limits and right-of-way would be identical for both of the Build Alternatives, the impacts to cultural resources would be the same for each Build Alternative. MDT's determination of effect for the project alternatives is summarized in Table 3.6.

Table 3.6 Cultural Resource Impacts by Alternative

Cultural Site	No-Build Alternative	Build Alternatives
KPRK Radio Station Site 24PA988	No Effect.	No Effect. Site is outside construction and right-of-way limits. The setting of the site would not be significantly impacted by the project.
Yellowstone River Highway Bridge Site 24PA1078 Update	No Effect.	Adverse Effect. The bridge would be removed and replaced with a new structure. The bridge would be handled under the terms of the PA for Historic Roads and Bridges.
Railroad Grade and Railroad Bridge Site 24PA1120 Update	No Effect.	No Effect. Construction would occur within the MRL ROW, but no changes to the railroad alignment or bridge would occur. The setting of the site would not be significantly impacted by the project.
The Rainbow Motel Site 24PA1185	No Effect.	No Adverse Effect. The roadway and slope would be widened closer to the site. The setting would change due to the reconstruction of the existing fill slope. No structures would be impacted as a result of the project and its historic function would be perpetuated.

No-Build Alternative

The No-Build Alternative would have no effect on cultural resources in the project area.

Build Alternatives

KPRK Radio Station (Site 24PA988)

There would be no effect to the NRHP-listed KPRK Radio Station under either of the Build Alternatives. The roadway would be widened at this location, but no new right-of-way would be required. The approach to the radio station, which is shared with the Rainbow Motel, would be modified as a result of the Build Alternatives. However, there would be no impact to the site during construction activities, and the site would continue its existing appearance and historic function during and after construction. There would be no substantial change to the setting of the site since the roadway would remain a two-lane facility.

Yellowstone River Highway Bridge (Site 24PA1078 Update)

There would be an adverse effect to the NRHP-eligible Yellowstone River Highway Bridge under both Build Alternatives. Because of existing environmental conditions and the recommendations of the Governor-appointed Upper Yellowstone Task Force (See Section 3.4.3), the bridge would be removed and replaced with a new structure with no effort made to preserve it in place.

Northern Pacific Railroad Grade and Bridge (Site 24PA1120 Update)

There would be no effect to the NRHP-eligible Northern Pacific Railroad Grade and Bridge under either of the Build Alternatives. Reconstruction of travel lanes, shoulders, and the Bennett Street intersection, construction of turn lanes, installation of guardrail, and grading would occur inside the existing railroad ROW. There would be no impact to the railroad's existing alignment, railroad grade, or the existing railroad bridge. There would be no substantial change to the setting of the site and both the railroad grade and bridge would continue to maintain their historic function and appearance.

Rainbow Motel (Site 24PA1185)

There would be no adverse effect to the NRHP-eligible Rainbow Motel under either of the Build Alternatives. The setting of the site may change as the widened roadway and the fill slope would be closer to the site, but no ROW would be required. The existing fill slope would need to be reconstructed and would be closer to the property, but would not encroach on any of the site's existing buildings. The approach to the motel and a portion of the parking area would likely be modified as a result of the Build Alternatives, but the site's historic function would be perpetuated.

Mitigation

The Yellowstone River Bridge (Site 24PA1078) would be adversely affected by both Build Alternatives. The removal and reconstruction of the bridge would be handled under the PA for Historic Roads and Bridges (signed in 1989 and amended 1992 and 2007), which provides standardized mitigation for impacts to historic highway bridges (see Appendix C).

3.3.8 Farmland

The proposed project is in a transition area from urban to rural land uses. The land adjacent to the south of the project area is primarily pastureland. The land adjacent to the north of the project area is a combination of highway and railroad right-of-way.

The 1981 Farmland Protection Policy Act (FPPA) requires the examination of effects of proposed highway projects prior to the acquisition of farmland. Pursuant to the FPPA, an inventory of farmland in the project area has been completed. The U.S. Department of Agriculture – Natural Resources Conservation Service (NRCS) was consulted with respect to farmland in the project area.

A Draft Soil Survey Map was provided by the NRCS on April 21, 2002. According to the draft map, the portion of the project area east of the Yellowstone River, approximately 4.5 hectares (11.1 acres), consists entirely of Farmland of Local Importance. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance has been identified within the boundaries of the proposed project. The finalized Park County Soil Survey, made available on July 10, 2006, supports the same findings presented in the Draft Soil Survey Map.

The FPPA definition of farmlands includes all areas in non-urban use. In addition to lands currently in crop production, this definition includes forested, idle, pasture, open, and recreational lands as well as unpaved roads, rural residences, and farm buildings. Farmland of Local Importance is land of importance to the local economy, as defined by each county's local advisory committee and adopted by its Board of Supervisors. Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Authority to adopt or to recommend changes to the category of Farmland of Local Importance rests with the Board of Supervisors in each county.

Impacts

The project area was inventoried using aerial photographs, the NRCS Park County Soil Survey, and site visits. The project area for each Build Alternative was developed assuming the required ROW would extend 3 m (10 ft) beyond the proposed construction limits for each Build Alternative. Potential impacts were determined using the difference between the existing ROW and the proposed ROW for the alternatives. Because the construction limits of each Build Alternative are identical, potential impacts to farmlands would be the same for both of the Build Alternatives.

As is required by the FPPA, MDT has coordinated with the NRCS, and the FPPA Farmland Conversion Impact Rating form (Form CPA-106) has been completed (see Appendix B). For the CPA-106 Form, the impacts to Farmland of Local Importance and site assessment criteria were calculated according to FPPA guidelines. Information from the CPA-106 form was used as the basis for the following farmland impact analysis. Farmland impact is divided into direct and indirect impacts. Direct impacts include those areas that would be used for road construction and ROW acquisition and would result in the creation of non-farmable land. Indirect impacts are impacts where land may become non-farmable because severance of parcels may restrict access and/or operations due to the size and shape of the parcel (i.e. creation of “remainder parcels”). No indirect impacts would occur under any of the alternatives in the project area.

No-Build Alternative

The No-Build Alternative would have no effect on farmlands in the project area.

Build Alternative

The direct impacts to Farmland of Local Importance would be approximately 0.2 ha (0.4 ac) for both Build Alternatives and there would be no impact to farm-related structures. The Build Alternatives would result in less than 160 total points on the CPA-106 Form; therefore, under the provisions of 7 CFR.658.4(c)(2), no additional consideration for this protection is necessary.

Mitigation

This project will not have a substantial impact to important farmlands. Because the Build Alternatives received total point values of less than 160 points on the CPA-106 Form, no mitigation is required. ROW acquisition would comply with the FHWA and MDT standard procedures for property acquisition (See Appendix B).

3.3.9 Visual Resources and Aesthetics

Visual Resources

There are two primary visual perspectives in the project area: from or adjacent to the roadway and from or adjacent to the river. The existing visual conditions in the project area and the potential visual impacts of the proposed bridge reconstruction are discussed in this section and are based on these two perspectives.

The project area is in the northeast area of Livingston, a transition area between urban and rural land use. The Livingston area is surrounded by mountains including the Bridger Range to the northwest, Crazy Mountains to the northeast (See Figure 1.3), and the peaks of the Absaroka Beartooth Wilderness to the southeast.

Currently, the bridge structure as viewed by the driver consists only of guardrail. The MRL Bridge, directly to the north, is the most prominent feature for drivers on or approaching the bridge from either direction. Built in 1918, the MRL Bridge is a three-span structure incorporating a two-span Warren Truss constructed from steel, wood, and concrete. The bridge displays a high level of integrity and is eligible for NRHP designation. The Yellowstone River, mature stands of cottonwood trees, and surrounding mountain ranges are also visible to drivers as they cross the bridge. A survey of the trees in the project area counted 360 trees with a diameter at breast height of 150 mm (6 in) or larger in the project area.

Recreational users of the river can view the structure of both bridges from vantage points along the river and its banks. The bridges' concrete pylons are especially visible from the water. The view of the MRL Bridge is partially obscured by the existing highway bridge when approaching on the water from the south (upstream). Both bridges obscure views of Crazy Mountains from this vantage point.

Aesthetics

The existing highway bridge is a five-span bridge set on four flared rectangular pier walls that are skewed 20 degrees from the bridge alignment (Figure 1.4). The bridge railing is concrete rail and post (Figure 1.4). No ornamental or lighting elements exist on the bridge.

The *Urban Design Framework Master Plan* (City of Livingston, 2002) recommended that the US 89 bridge be redeveloped as a multi-modal gateway feature for the community. With respect to aesthetics, the Plan states that the bridge design should incorporate "unique aesthetic treatments that integrate public art, cultural and historic considerations of the region, and gateway lighting and signage to celebrate the east entry to the City of Livingston and Park County."

The *Livingston Patterns Downtown* (City of Livingston, 2003) identifies architectural design parameters for future public works in the Central Business District of Livingston. The City would like similar studies to be conducted for East Park Street, the Yellowstone River Bridge, the Bennett Street intersection, and multi-use paths in the project area. MDT has no plans to conduct such a study as part of this bridge replacement project; however, concepts presented in *Livingston Patterns Downtown* were taken into consideration for this project.

Impacts

No-Build Alternative

The No-Build Alternative would have no effect on visual resources in the project area.

Build Alternative

Visual Resources

Both of the Build Alternatives would incorporate a railing design, such as steel box tube railing, that would be less of an impediment to the surrounding views from the bridge than the existing concrete post and rail design. However, both of the Build Alternatives would include pedestrian rail along the south side of the bridge deck, which could increase the impediment of driver views of the Yellowstone River to the south of the bridge. These two changes would likely offset one another resulting in a negligible change, if any, to driver views of the Yellowstone River.

If the two proposed parking areas are constructed as part of this project, they would also be visible to drivers traveling either direction through the project area. Another visual change for drivers would

result from the removal of mature cottonwood trees along US 89 that could occur due to the widening of the roadway approaches, reconstruction of the Bennett Street intersection, and the potential provision of parking areas. It is anticipated that approximately 20 to 25 percent of the trees in the project area with a diameter at breast height of 150 mm (6 in) or larger would be removed as a result of either of the Build Alternatives. Most of these impacted trees are along the north side of US 89.

Views from the river and river banks would be similar to the existing conditions. Neither of the Build Alternatives would impede views of the surrounding landscape any more than the existing bridge. The proposed parking areas would not be visible from the river.

Aesthetics

The bridge designs under the Build Alternatives maintain the slender profile of the existing bridge so that the visual intrusion of the bridge on the surrounding views and natural environment would be minimized. The colors of the bridge materials could be selected to blend with the surrounding environment more so than the existing bridge. The abutments could be constructed of materials that would blend with the surrounding natural environment (e.g., natural rock formliner) or reflect the built environment of Livingston (e.g., bricks or brick formliner). The pedestrian railing could be horizontal or vertical picket based on community input. The pedestrian railing could be painted or galvanized, also based on community input.

Both Build Alternatives would maintain a slender bridge profile and provide aesthetic improvements over the existing condition. Under both alternatives the bridge design would include a crest vertical curve near the center of the bridge that might improve aesthetics as compared with the straight lines of the existing bridge. If haunched girders are used for Alternative 1 (see Figure 2.5), the bridge profile may appear more slender than with the parallel flanged girders (see Figure 2.11). In addition, the haunched girders may serve to frame the views of the surrounding environment. Therefore, it is anticipated that Alternative 1, if designed with haunched girders, would have more aesthetic appeal than Alternative 2. The specific elements and aesthetics of the bridge would be determined during final design.

Mitigation

Impacts to trees in the project area will be minimized wherever practicable during final design.

3.3.10 Energy

Energy use within the project area currently relates to vehicle fuel consumption. Fuel consumption is a function of traffic characteristics including traffic flow, driver behavior, highway geometrics, vehicle fleet, and climate. Construction of a new bridge and roadway would require the expenditure of energy both for operation of construction equipment and machinery as well as the manufacture of project components.

Impacts

No-Build Alternative

The No-Build Alternative would have no effect on energy use in the project area.

Build Alternatives

Overall, the proposed improvements under the Build Alternatives may have a minor benefit on energy because of improved traffic flow at the Bennett Street intersection.

Mitigation

No adverse impacts to energy use would occur; therefore, no mitigation is required.

3.4 EFFECTS ON THE NATURAL AND PHYSICAL ENVIRONMENT

3.4.1 Floodplains – Executive Order 11988

EO11988, Floodplain Management, requires federal agencies to avoid direct or indirect support of floodplain development whenever a practicable alternative exists. EO 11988 and 23 CFR 650 Part A requires an evaluation of project alternatives to determine the extent of any encroachment into the base floodplain. The base flood (100-year flood) is the regulatory standard used by federal agencies and most states to administer floodplain management programs. A “floodplain” is defined as lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, with a one percent or greater chance of flooding in a given year. As described in FHWA’s floodplain regulation (23 CFR 650 Part A), floodplains provide natural and beneficial values serving as areas for fish, wildlife, plants, open space, natural flood moderation, water quality maintenance, and ground water recharge.

The Federal Emergency Management Agency (FEMA) has delineated approximate 100-year floodplain boundaries for the Yellowstone River (Park County, Community Panels No. 300160 A and 300130 A, Zone A, Flood Insurance Rate Map [FIRM]). The existing bridge crosses the Yellowstone River 100-year floodplain, which is a transverse encroachment of the floodplain. However, because the roadway approaches to the bridge are higher than the surrounding area, most of the existing roadway facility within the project area is not delineated as part of the floodplain.

Impacts

Impacts to the 100-year floodplain can occur in two forms: (1) directly through changes to the volumetric capacity of the floodplain (e.g., filling, bridges, and piers) due to longitudinal or transverse encroachment or (2) indirectly through an increase in the total volume of water arriving at and being conveyed by the floodplain due to an increase in impervious surface area.

No-Build Alternative

The transverse encroachment of the existing highway facility would continue under the No-Build Alternative. The facility currently impacts less than 0.1 ha (0.25 ac) of the Yellowstone River 100-year floodplain within the project area.

Build Alternative

The proposed Build Alternatives would require fill to be placed within the Yellowstone River 100-year floodplain based on the regulatory FEMA floodplain delineation mapping. However, a detailed hydraulic analysis of this particular site was conducted to determine the water surface elevation at various flood levels based on the proposed bridge replacement. This analysis indicates that the

increased bridge length and removal of the existing bridge abutments would maintain or possibly reduce the existing transverse encroachment of the 100-year floodplain at the bridge.

Under either of the Build Alternatives, the hydraulic performance with respect to debris and ice accumulation and pier scour at the bridge would be improved by widening the hydraulic opening at the bridge, reducing the number of piers in the river, and minimizing the width and length of the piers. Alternative 1 is proposed to have a single shaft pier, which is considered optimal for hydraulic performance and minimizing scour. The double shaft pier configuration proposed for Alternative 2 would be more susceptible to pier scour and debris and ice accumulation than Alternative 1 when the river approach angle changes.

Both of the proposed Build Alternatives have a larger hydraulic opening than the existing bridge and would decrease the backwater if the downstream railroad bridge is replaced with a longer structure. The Upper Yellowstone River Task Force recommended evaluating a bridge that would provide zero backwater and performing a cost/benefit analysis. Although true zero backwater is an unattainable goal since the piers of the highway and railroad bridges would remain in the river, Alternative 1 and Alternative 2 were sized independently of the downstream railroad structure to provide an optimum hydraulic performance and reduction in backwater. Bridge lengths in excess of the proposed structure length would result in a substantial increase in cost for a very slight decrease in backwater. Backwater would be reduced as compared with existing conditions under either of the Build Alternatives; however, the backwater reduction would be minimal until the downstream railroad structure is replaced with a structure at least as long as the proposed highway structure. Both Build Alternatives for the roadway bridge would provide a beneficial impact by increasing the hydraulic opening, better aligning the bridge to the river, and reducing the number of piers in the water.

Mitigation

All practical alternatives to minimize harm to floodplains will be incorporated in the Build Alternatives including the use of slope stabilization structures. Impacts to the floodplain will be minimized by following standard stream crossing design criteria and avoiding direct impacts on stream channels whenever practicable. To minimize impacts, design of this project will be in compliance with Federal-Aid Highway Program Manual (FHPM) 6-7-3-2 "Location and Hydraulic Design of Encroachments on Flood Plains" (also referenced as 23 CFR 650 A) and Executive Order 11988, Floodplain Management.

As specified in the MDT Location Hydraulic Study Report dated October 15, 2002, coordination with the Park County Floodplain Administrator will be required to obtain a Floodplain Development Permit for locations where the floodplain has been delineated.

3.4.2 Water Resources/Quality

Surface Water

Section 303(d) of the Federal Clean Water Act and related regulations require states to assess the condition of their waters to determine where water quality is impaired (does not fully meet standards) or threatened (is likely to violate standards in the near future). The result of this review is the 303(d) list, which must be submitted to the EPA every other year. Section 303(d) also requires states to prioritize and target water bodies on their list for development of water quality improvement strategies (i.e., establishing total maximum daily loads [TMDLs] of pollutants), and to develop such strategies for impaired and threatened waters. Under Montana statutes, "credible scientific data" are required to list a water body on the 303(d) List. Listings fall into the following categories:

- **Fully supporting:** achieving all the water quality standards.
- **Threatened:** fully supporting designated uses but threatened for a particular designated use because sources are not subject to permits or regulation or adverse pollution trends have been documented.
- **Partial supporting:** not achieving all the water quality standards for the use in question, but the degree of impairment is not severe.
- **Non-supporting:** not achieving all the water quality standards for the use in question, and the degree of water quality impairment is relatively severe.
- **Not Assessed**

The Yellowstone River is listed in the Section 303(d) 2004 report along with 23 other water bodies in Park County. Of these water bodies, only the Yellowstone River is directly adjacent to the proposed project area. Other listed water bodies would not be impacted by this project because they are either upstream of the project area and/or terminate at the Yellowstone River. Therefore, only the Yellowstone River is discussed.

The Yellowstone River flows from Yellowstone Lake in Yellowstone National Park to the Missouri River east of the Montana state line in North Dakota. The segment of the Yellowstone River that flows through the project area (Reece Creek north to Bridger Creek) is assessed with impaired uses (partially supporting) for aquatic life support and cold water fishery-trout. This segment of the Yellowstone River has not been assessed for agriculture, drinking water, industrial, or primary contact (recreation). The probable cause of impairment is habitat alteration. Total maximum daily loads have not been developed for this water body.

Ground Water

Drinking water is supplied through ground water sources. There is a mix of individual wells and small public water systems within the project vicinity. The public water systems are not located within the project area. According to well data obtained from the Ground Water Information Center (GWIC), Montana Bureau of Mines and Geology, the deepest of these wells is 21.9 m (70 ft). Drinking water is of high quality.

Public Water Supply

There are no public water supply sources in the project area.

Impacts

No-Build Alternative

The No-Build Alternative would cause no additional impact to water resources/quality.

Build Alternatives

The Yellowstone River would be impacted by the proposed project. In-stream work would be required for demolition of the existing structure and construction of the new structure. Bridge replacement can change water flows, sediment transport rates, sediment composition, and subsequent changes in pollutant loads, thermal fluctuations, and erosion. Proper design of bridge piers and abutments and adherence to Best Management Practices (BMPs) to avoid erosion and flow impacts during construction can reduce potential for water quality impacts. Permanent water quality impacts would generally be limited to those associated with increased impervious surface area. Additional vegetation

would be removed during construction for bridge replacement and construction operations for both Build Alternatives. The habitat provided by that vegetation would be lost as a result.

For both Build Alternatives, there would be no impacts to public water supply. One ground water well is present in the study area and could be impacted by the proposed project. Other ground water wells could be impacted if discovered during final design or construction, but at this stage, no other known wells would be impacted by the Build Alternatives.

Impervious surfaces can have an effect on water quality. Stormwater runoff increases as the area of impervious surface increases. Runoff can carry sediments and other pollutants and debris into streams and wetlands, which degrades water quality. In addition, runoff from impervious surfaces has a higher temperature than water that percolates through the ground to recharge ground water. The discharge of warmer water into water bodies can affect water quality. Both Build Alternatives would increase the amount of impervious surface by more than twice that of the existing bridge and roadway approaches. This includes additional impervious surfaces that would be created by the new wider bridge and roadway approaches.

Mitigation

The Build Alternative will be in compliance with conditions of the water quality permits, which are intended to minimize impacts to water bodies. Specific mitigation measures would include:

- Adherence to MDT BMPs.
- An erosion and sediment control plan prepared in compliance with the Montana Pollutant Discharge Elimination System (MPDES) regulations.
- Adherence to conditions specified in the Montana Stream Protection Act (SPA 124).
- Adherence to the COE 404 Permit conditions.
- If avoidance is not possible, relocation of any impacted wells will occur in accordance with FHWA's and MDT's standard procedures.

3.4.3 Water Body Modifications

One major water body (Yellowstone River) and one agricultural overflow ditch (tributary to the Yellowstone River) lie within the project limits. Both of these water bodies are considered "waters of the U.S.," as defined by the COE, and the segment of the Yellowstone River that flows through the project area is a federally listed navigable water of the U.S. The agricultural overflow drainage ditch flows into the Yellowstone River on the southeastern side of the US 89 bridge. Within the project area, there are no structures associated with this water body.

The existing five-span highway bridge on US 89 consists of four rectangular flared pier walls which are skewed 20 degrees from the alignment (Figure 2.4). The existing MRL railroad bridge, located approximately 60 m (200 ft) downstream of the highway bridge, consists of two truss spans with a short girder span on the west end. The railroad pier and highway bridge piers are currently offset from each other, causing compounded hydraulic impacts.

The Governor's Upper Yellowstone River Task Force conducted an interdisciplinary study to assess the cumulative effects of bank stabilization, and natural and other channel modification on the physical, biological, and cultural attributes of the Upper Yellowstone River. The following recommendations made by the Task Force pertain to the proposed Yellowstone River Bridge replacement or to the portion of the Yellowstone River in the project area. The Task Force refers to the Yellowstone River Bridge as the Highway 10/89 South Bridge.

- II. a.** “When the following bridges are replaced or removed, hydraulic impacts identified in the Geomorphology Study should be lessened: Emigrant Bridge; Carter’s Bridge; Interstate-90 Bridge; Railroad Bridge at Highway 10/89 South; Highway 10/89 South Bridge; Highway 89 North Bridge (near the Shields River); Railroad Bridge at Highway 89 North (near the Shields River); and Springdale Bridge.”
- II. b.** “Solutions should be developed to remove abandoned bridge abutments and piers, and to reclaim abandoned bridge approaches.”
- II. c.** “All new bridges and bridge substructure reconstructions (for example, piers and abutments) should be designed to minimize upstream and downstream negative impacts of sedimentation and gravel deposition.”
- II. d.** “Bridge design considerations on the upper Yellowstone River should include examination of the cumulative impacts and the costs and benefits of zero backwater standards at any scheduled reconstruction. As an initial project, a zero backwater design at the Highway 10/89 South Bridge over the Yellowstone (east of Livingston) should be evaluated to increase the flow capacity of the river through town, and the Governor should enlist the cooperation and support of the railroad to build a parallel zero backwater bridge north of the Highway 10/89 South Bridge.”

In recommendation II. d., the Task Force does not dictate that this standard be required on all future projects; rather, they recommended that an examination of the cumulative impacts and the costs and benefits of zero backwater standards be included in Yellowstone River bridge designs in the future. Further, the Task Force acknowledges that if the highway bridge is replaced with a better design, and if the railroad bridge downstream is not rebuilt to the same standards, the constraint remains the railroad bridge and negative impacts and backwater will not be reduced.

Impacts

Potential water body modifications resulting from the proposed improvements are typically determined by proposed bridge designs for each alternative. Bridge engineering, and analysis of resulting water body modifications, would be conducted during final design. Short-term construction-related impacts to water bodies from constructing the Build Alternatives are discussed in Section 3.5.

No-Build Alternative

Under the No-Build Alternative, the existing Yellowstone River Bridge on US 89 would remain. There would be no improvements to the structure other than on-going maintenance. No in-water work or modifications to the Yellowstone River or agricultural ditch would be required. There would be no impacts to water bodies under the No-Build Alternative.

Build Alternatives

There would be no impacts to the agricultural overflow ditch under either of the Build Alternatives.

Alternative 1 would include replacing the existing five-span bridge over the Yellowstone River with a new four-span bridge. The proposed bridge may be constructed with haunched girders. Three single shaft piers are anticipated. Reducing the number of piers in the Yellowstone River (from four to three) and constructing the bridge with single shaft piers would improve the long-term hydraulic performance of the bridge by improving the flow of water under the bridge.

Under Alternative 2, the proposed bridge would be constructed with parallel flanged girders and three double shaft piers on an approximately 30-degree skew. The bridge design would improve hydraulic performance over the existing bridge. Each new pier would have two shafts constructed parallel to the river flow. This type of pier would reduce the size of the pier shafts. However, the river is very dynamic in this location and changes channel location frequently. Once the river changes its approach angle, the double shaft pier would no longer be aligned with the river and would effectively be larger than the single shaft pier. When this occurs, the double shaft piers would be more susceptible to pier scour as well as debris and ice accumulation, which could obstruct the flow of water.

Alternative 1 would best meet the Governor's Upper Yellowstone River Task Force recommendation of lessening the compounded hydraulic impacts created by the US 89 highway bridge and the MRL railroad bridge (recommendation II. a.). Both Build Alternatives would meet the recommendation pertaining to removing abandoned bridge abutments and piers (recommendation II. b.). Alternative 1 would best meet the recommendation of minimizing upstream and downstream negative impacts of sedimentation and gravel deposition (recommendation II. c.). The zero backwater analysis recommendation (II. d.) was completed during the hydraulic evaluation of the existing and proposed structures. Although true zero backwater is an unattainable goal since the piers of the highway and railroad bridges would remain in the river, Alternative 1 and Alternative 2 were sized independently of the downstream railroad structure to provide an optimum hydraulic performance and reduction in backwater. Bridge lengths in excess of the proposed structure length result in significant increase in cost for a very slight decrease in backwater. Backwater would be reduced as compared with existing conditions under either of the Build Alternatives; however, the backwater reduction would be minimal until the downstream railroad structure is replaced with a structure at least as long as the proposed highway structure.

Under either of the Build Alternatives, the pier configuration of the new bridge would not adversely affect the railroad bridge structure immediately downstream. The water velocity through the railroad structure would be approximately the same for both alternatives as under existing conditions. The increased length of the highway bridge has the potential to slightly increase scour through the railroad bridge, but not enough to result in adverse impact to the railroad bridge structure.

Mitigation

All work will be performed in accordance with state and federal guidelines regarding water quality conditions. These include the applicable regulations under the Federal Clean Water Act of 1977 (i.e., 404 Permit and Section 402/MPDES permit) and specific permit requirements from the Montana SPA 124; Montana 318 Authorization; Federal Rivers and Harbors Act (Section 10 Permit), Montana Land-use License, and any other laws or regulations that may apply to the project. MDT will incorporate a Stormwater Pollution Prevention Plan (SWPPP) and BMPs in the proposed construction project. The bridge will be designed to minimize permanent alterations of the river banks. Clearing of riparian areas will be done in accordance with mitigation measures described in Section 3.4.7, Section 3.4.2, and Section 3.4.5. Mitigation for construction activities is described in Section 3.5.

3.4.4 Wetlands and Other Waters of the U.S. – Executive Order 11990

Wetlands and other waters of the U.S. are regulated by Section 404 of the Clean Water Act and Executive Order (EO) 11990 Protection of Wetlands. The COE is the primary regulating agency for wetlands in Montana and makes final determinations regarding jurisdiction of wetlands.

Jurisdictional wetlands must satisfy three parameters including hydrophytic vegetation, hydric soils, and wetlands hydrology as described in Section 404 of the Clean Water Act. Jurisdictional waters of

the U.S. are defined by the COE as “waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, — the use, degradation, or destruction of which could affect interstate or foreign commerce” (Federal Register, 1986). For instance, irrigation canals that exchange water with natural streams and lakes are waters of the United States.

Research Methods

A wetland delineation was conducted in the project vicinity in April and June of 2003 as well as October 2006 in order to determine the presence and extent of wetlands. The analysis of wetlands was based on the routine (on-site) methodology of the COE *Wetlands Delineation Manual* (Environmental Laboratory, 1987). Two areas were found to be waters of the U.S. and four were determined to be jurisdictional wetlands based on the presence of the three parameters for wetland identification. No non-jurisdictional wetlands were identified in the project area. Locations of wetlands identified in the project area are found on the Environmental Overview Map in Appendix A. Full descriptions of each jurisdictional wetland are found in *Yellowstone Bridge NE of Livingston Biological Resources Report* (June, 2005) and the *Biological Resources Report Addendum* (November 2006).

Functional Value Assessment

The jurisdictional wetland areas were evaluated for functional value according to the MDT Montana Wetland Assessment Form. The jurisdictional wetlands found on-site are categorized as III or IV. Category III wetlands are more common, often less diverse, smaller, and more isolated than Category I or II wetlands. Despite this, they are still able to provide many functions and values. Category IV wetlands are generally small, isolated, and lack vegetative diversity; provide little in terms of wildlife habitat, and are often directly or indirectly disturbed.

None of the wetlands in this project area is high quality Natural Heritage Wetlands (Category I) because most wetlands are adjacent to the MRL railroad or US 89 and some of the wetlands contain a culvert that could bring contaminants into the wetland system. In addition, agricultural uses near the wetlands may cause fertilizers, pesticides, or stock manure discharges into the shallow water table. Thus, the functional value of on-site wetlands for toxicant removal is not rated as sustaining high quality Natural Heritage Wetlands. None of the wetlands has irreplaceable ecological functions such as peat wetland or forested wetland component greater than one acre.

Impacts

Table 3.7 presents the approximate total potential direct impacts to jurisdictional wetlands in the project area. Long-term direct wetland impacts include the loss of wetland area, which would occur under the Build Alternatives. These impacts could result from the grading and filling for the wider roadbed and construction of the new bridge. The construction impacts are expected to be the same for both Alternative 1 and Alternative 2; therefore, they would incur the same impacts to wetlands in the project area. The potential direct impacts for the Build Alternatives include temporary construction impacts to wetlands and loss of wetland area and are discussed in Section 3.5.

Potential indirect impacts to wetlands from the Build Alternatives could include the modification of wetland functions due to water quality degradation and increased water temperature. Growth inducement was also assessed. The proposed project is not expected to increase development, agricultural activities, or the level of use (traffic) on the US 89. Therefore, the proposed project would not result in impacts to wetlands from induced growth.

Table 3.7 Potential Jurisdictional Wetland Impacts by Alternative

Wetland Description				Wetland Impacts	
Wetland	Wetland Location	MDT Classification	Total Wetland Area	No-Build Alternative	Build Alternatives
Wetland A	Northwest side of bridge	Class III	0.2 ha (0.5 ac)	0.0 ha (0.0 ac)	< 0.1 ha (0.1 ac)
Wetland B	West of Wetland A and northwest of bridge	Class IV	< 0.1 ha (0.2 ac)	0.0 ha (0.0 ac)	< 0.1 ha (0.1 ac)
Wetland C	Southeast of bridge	Class III	0.8 ha (2 ac)	0.0 ha (0.0 ac)	< 0.1 ha (0.1 ac)
Wetland D	Northeast of bridge	Class III	1.5 ha (3.7 ac)	0.0 ha (0.0 ac)	0.2 ha (0.5 ac)
Total Potential Impacts			2.6 ha (6.4 ac)	0.0 ha (0.0 ac)	0.3 ha (0.8 ac)
Percent of Total Wetland Area Potentially Impacted				0.0%	13.1%

Source: David Evans and Associates, Inc., November 2006. MDT Project BR 11-1(44) 56 Control No. 4790 Biological Resources Report Addendum.

Water Quality Degradation

The primary source of contaminants from transportation systems is runoff (including metals and inorganic material) from impervious surface area. Because the existing highway would be widened in some locations, impervious surface area would increase and could contribute to the amount of contaminant input into wetlands. Although the amount of impervious surface in the project area would more than double as a result of the Build Alternatives, the resulting increase in runoff would be minimal as would the potential impacts to water quality. Also, the wetlands in the project corridor already experience stormwater runoff input from adjacent land uses including the existing roadway, railroad, and agriculture land.

Increased Water Temperature

The increase of impervious surface area and clearing of vegetation, especially riparian vegetation, are the two actions that most affect water temperature. Survival of vegetation and aquatic organisms is dependent on water temperature. An increase in impervious surface area can increase water temperature by further dispersing water and creating more surface area, causing the water temperature to increase. Clearing of vegetation reduces infiltration and shading, and creates more solar exposure to runoff, resulting in increased water temperatures in wetlands. The effect to wetlands in the project area under the Build Alternatives would be minimal. The project would result in a small increase of new impervious surface and the clearing of no more than approximately 0.1 ha (0.3 ac) of riparian vegetation. This increase would be minor compared to the scale of the Yellowstone River and would only have a minor effect on water temperature in the project vicinity.

Mitigation

Impacts to specific wetlands in the project area would be unavoidable due to the existing alignment of the highway (bridge) and the locations of the wetlands. MDT's standard practice in regard to jurisdictional wetland impacts is to:

- 1) Avoid potential adverse impacts to the maximum extent practicable.
- 2) Minimize unavoidable adverse impacts to the extent appropriate and practicable.

- 3) Compensate for unavoidable adverse impacts that remain after all appropriate and practicable minimization has occurred.

Estimated wetland impacts included in this EA are based on conceptual design and are subject to COE review. Adverse wetlands impacts have been avoided and minimized as much as practicable and as much as can be determined in the conceptual design phase. Avoidance and minimization measures to date include steepening fill slopes where practicable and where safety would not be compromised. Avoidance and minimization measures will continue to be employed where practicable throughout the design and construction. Mitigation for unavoidable adverse impacts to jurisdictional wetlands will be coordinated with the COE and other resource agencies as required for permitting.

The wetland replacement ratio and wetland mitigation sites will be identified in consultation with the COE during permitting. Limited possibilities for on-site mitigation exist within the project area due to existing development, private land ownership, and adjacent railroad right-of-way. Off-site mitigation will likely be required for the impact that may occur. This will be assessed during the permitting process with the COE. If off-site mitigation is required, some options that qualify under the MDT Wetland Mitigation Bank Program within watershed #13 – Upper Yellowstone include Cloud Ranch, Norem Ranch, Easton Ranch, and Murphy Ox Yoke Ranch.

3.4.5 Vegetation

The vegetation in the project area consists mainly of riparian, emergent and scrub-shrub wetland floodplain, and emergent vegetation communities. The riparian community is located on all sides of the existing bridge along the banks of the Yellowstone River and contains primarily forested, scrub-shrub, and herbaceous species such as peachleaf willow, narrowleaf cottonwood, red-osier dogwood, mountain maple, sandbar willow, western snowberry, smooth scouring rush, meadow foxtail, and needleandthread. The emergent and scrub-shrub wetland floodplain communities are located on the southwestern, northeastern, and northwestern sides of the existing bridge and consists of species such as sandbar willow, red-osier dogwood, chokecherry, trailing blackberry, Wood's rose, black wild currant, western snowberry, showy milkweed, creeping spikerush, field horsetail, climbing nightshade, smooth scouring rush, poison hemlock, reed canarygrass, water smartweed, starry false solomon's seal, curly dock, tall buttercup, and hound's tongue. The emergent vegetation community is located primarily in the highway right-of-way and consists of common dandelion, field pennycress, western wheatgrass, white clover, spotted knapweed, Canada thistle, common yarrow, tall yellow sweet clover, common mullein, hound's tongue, orchard grass, leafy spurge, needleandthread, and cheatgrass. MDT conducted a survey of trees in the project area with a diameter at breast height of 150 cm (6 in) or larger, which located 360 trees.

Montana Species of Special Concern

No vegetative species in the project vicinity are listed on the Montana Natural Heritage Program (MTNHP) species of concern list.

Noxious Weeds

According to the Park County Weed Supervisor, noxious weeds such as hound's tongue, Canada thistle, Russian knapweed, spotted knapweed, common mullein, poison hemlock, and field bindweed may occur along the edge of the roadway in the project area. All of these species, with the exception of Russian knapweed and field bindweed were observed in the project vicinity during field investigations on April 22 and 23 and June 10, 2003.

Impacts

No-Build Alternative

Under the No-Build Alternative, there would be no transportation improvement activities. Therefore, no impacts to vegetative species would result.

Build Alternatives

Because there are no vegetation species identified as Montana species of special concern in the project area, there would be no impacts to these species.

Long-term impacts to vegetation under Alternative 1 and Alternative 2 include a permanent loss of vegetation, including riparian vegetation and mature cottonwood trees, from replacement of the Yellowstone River Bridge and reconstruction of the corresponding roadway approaches, including the Bennett Street intersection, and the potential construction of the two gravel parking areas. Specifically, widening the US 89 bridge approaches and constructing gravel parking areas would require clearing and grading along the existing right-of-way and may affect herbaceous communities and small areas of wetland emergent, scrub-shrub, and forested habitat. However, these impacts would be minor because the majority of the vegetation being permanently removed has already been disturbed by the existing roadway. Approximately 2.8 ha (6.9 ac) of mixed habitat types would be removed. This represents the approximate amount of currently undeveloped land within the proposed construction limits. The riparian vegetation that would be removed, a maximum of approximately 0.1 ha (0.3 ac), is a small portion of similar vegetation in the project vicinity. It is anticipated that approximately 20 to 25 percent of the trees in the project area with a diameter at breast height of 150 cm (6 in) or larger would be removed under either of the Build Alternatives.

Increases in noxious weeds from the proposed project would be small. The vegetation areas along US 89 and Bennett Street already experience some level of noxious weed invasion.

Mitigation

In accordance with MDT Standard Specifications, clearing and grubbing will be limited to the area necessary for construction of the project. MDT will follow its general BMPs to reduce impacts to vegetation.

Mitigation for noxious weeds is described in Section 3.5.

3.4.6 Wildlife and Migratory Birds

Montana Species of Special Concern

The Montana Natural Heritage Program identified the long-billed curlew (*Numenius americanus*) as a species of concern for the state that may be found in the project vicinity. The long-billed curlew is considered to be at risk because of limited number of individuals or habitat within the state, making them vulnerable to extirpation in the state. The species is not in danger of extinction globally. The long-billed curlew has historically had a breeding population in the project vicinity. Currently, the closest curlew habitat is approximately 2.7 km (1.7 mi) from the project area (MTNHP 2006).

According to the United States Fish and Wildlife Service (USFWS), occasional transient bald eagles have been sighted in the spring and fall on the Yellowstone River in the project vicinity; however, no wintering activity has been documented. The nearest documented nesting territory is located

approximately 4.0 km (2.5 mi) northeast of Livingston along the Yellowstone River. This nest has been active since 1998. As of July 7, 2007, the bald eagle has been delisted from the Threatened and Endangered Species list. It is currently listed as G4/S3 under the MTNHP, which means that globally the species is apparently secure, but in Montana it is 1) very rare and local throughout its range, or 2) found locally in a restricted range, or 3) vulnerable to extinction throughout its ranges because of other factors. The bald eagle is protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Act. The BGEPA prohibits the take of bald eagles, including disturbance. The bald eagle nest mentioned above is outside of the buffers listed in the National Bald Eagle Management Guidelines (USFWS, 2007).

Rural and Urban Wildlife

The Yellowstone River riparian corridor provides important wildlife habitat for several rural and urban terrestrial species including squirrel, striped skunk, voles, shrew, mice, raccoons, and rats. In addition to these species, white-tailed deer, coyote, bobcat, European rabbit, river otter, porcupine, badger, foxes, ground squirrel, bird species, and other open forest and grassland animals (rural wildlife) most likely use the wetland/riparian areas. The project area currently provides habitat for wildlife as evidenced by numerous game trails and other signs of use. Woody cover in the Yellowstone River riparian zone in the project area, as well as the adjacent agricultural lands, provides white-tailed deer habitat and a year-round food source for the species.

Migratory Birds

Several bird species are present in the vicinity including American robin, mourning dove, common crow, song sparrow, cliff swallow, black-billed magpie, Canada goose, mallard, and turkey vulture. While these birds are not species of special concern at the federal or state level, they are protected by the federal Migratory Bird Treaty Act (MBTA) of 1918. No nests, including cliff swallow nests, were observed during site visits on April 22 and 23 and June 10, 2003. Other bird species are likely present in the project area, but were not observed during field visits.

Impacts

No-Build Alternative

Under the No-Build Alternative, there would be no transportation improvement activities. Therefore, no impacts to wildlife would result.

Build Alternative

The proposed project may directly affect rural and urban wildlife and migratory birds through habitat alteration, fragmentation, and human-related disturbance. The potential direct impacts would be similar under both Alternative 1 and Alternative 2.

Montana Species of Special Concern

No impacts to long-billed curlew are anticipated under either of the Build Alternatives.

The Build Alternatives are not likely to adversely impact bald eagles. No long-term direct impacts would be expected to result following bridge construction. Potential indirect impacts to bald eagles would be similar under both of the Build Alternatives and were assessed for the following topics: prey habitat alteration, prey species mortality, and water quality degradation. Due to the relatively limited area that may be disturbed by the project, and since the area is not considered prime habitat, the project would not substantially affect bald eagle prey habitat in the project vicinity. The main

consideration of impacts to bald eagles in the project vicinity is the removal of riparian habitat that may be used as foraging habitat or movement corridors. The Build Alternatives include a wider road width at the proposed approaches, which may decrease the potential for wildlife fatalities, including bald eagle terrestrial prey species. This is because the wider shoulders along the roadway would allow drivers more area for maneuverability to avoid wildlife. The indirect effect on bald eagle aquatic prey species from water quality degradation would be minimal because the proposed project would not substantially contribute to contaminant input into the Yellowstone River; the release of sediment into the river; or an increase in the water temperature of the river.

Rural and Urban Wildlife

Habitat Alteration and Fragmentation

The proposed project would impact approximately 2.8 ha (6.9 ac) of mixed habitat types. This represents the approximate amount of undeveloped land within the proposed construction limits. All of this land currently experiences human disturbance and is located adjacent to an existing highway and railroad. Fragmentation of terrestrial habitat in the project area occurred during the initial construction of US 89, resulting in the creation of edge habitat. Given these existing conditions, the proposed project would not increase the amount of edge habitat or fragmentation. The proposed bridge abutments would be located above the normal high-water channel and would improve movement of wildlife along the river corridor.

Mortality

The proposed project is not anticipated to increase wildlife fatalities within the project limits. Traffic volume is not expected to increase as a result of this project, and the speed limit would remain the same. The proposed project would increase the width of the existing two-lane road. The wider road width at these areas may decrease mortalities because drivers would have more visibility and reaction time to maneuver around the animal.

Overall, the potential impacts to rural and urban wildlife would be minimal because the project would be constructed on or adjacent to the existing highway where disturbances are currently high and because there is an abundance of suitable habitat located outside the project area. Therefore, the proposed project is not likely to contribute to a trend toward federal listings or loss of viability of any wildlife.

Potential indirect impacts that may occur to wildlife from the proposed project include increased water quality degradation. The potential indirect impacts would be similar under Alternative 1 and Alternative 2.

Migratory Birds

Potential long-term impacts to migratory birds could occur as a result of loss of habitat from construction of the bridge and roadway improvements. Most of the migratory bird species are found in the riparian areas and may be impacted from the loss of habitat in these areas. However, the approximately 0.1 ha (0.3 ac) of riparian habitat that could be impacted in the project area represents a small portion of similar habitat in the project vicinity. Although no nests were identified during field visits, migratory bird nests could be disturbed if the bridge is replaced when active nests are present.

Mitigation

Montana Species of Special Concern

No adverse impacts to long-billed curlew would occur; therefore, no mitigation is required.

Although no documented bald eagle nesting sites are present in the project area, closer to the start of construction, a biologist will verify that there are no bald eagle nests within one mile of the project area. If nests are found, MDT would consult with MFWP prior to the start of any construction activities.

The removal of riparian habitat will be minimized as practicable. BMPs and a SWPPP will be incorporated into construction projects. Fill of any kind into the Yellowstone River will be minimized.

Rural and Urban Wildlife

Removal of wildlife habitat would be minimized or avoided to the extent practicable. There is an opportunity to enhance wildlife movement at the new bridge with the longer structure which would provide more space underneath the bridge.

Migratory Birds

Although no nests were identified during field visits, the Yellowstone River Bridge will be rechecked for nesting activity closer to the start of construction. If nests are identified and the bridge is to be removed during the migratory bird nesting period, inactive nests will be removed prior to the nesting period and efforts will be undertaken to ensure that new nests are not established prior to removal of the old structure. If active nests are re-established or exist on the structure on or between May 1 and August 15 (the nesting period), the structure or nests will not be removed until the MDT project manager, in coordination with MDT Environmental Services, provides approval.

3.4.7 Aquatic Species

The reach of the Yellowstone River in the project vicinity supports a variety of Montana native and game fish, and aquatic species including insects. Fish species that may occur in the project vicinity include mountain sucker, white sucker, longnose sucker, mottled sculpin, longnose dace, rainbow trout, brown trout, brook trout, mountain whitefish, and Yellowstone cutthroat trout. Although some aquatic insects exist in the project area, the quality of the habitat is low due to the depth of the water and the turbulence near the bridge piers.

Adult migration, spawning, and rearing habitats are important seasonally to most of the fish species listed above, with the exception of brook trout, mountain sucker, and Yellowstone cutthroat trout which are not known to use this area extensively. The Yellowstone River provides migration and foraging habitat in the vicinity of the structure, but spawning habitat is not present.

Montana Species of Concern

Yellowstone Cutthroat Trout (*Oncorhynchus clarki bouveri*) is listed by the MTNHP as a species of special concern with G4/S2 ranking, which means that globally the species is secure, but in Montana it is imperiled because of rarity or because of other factors making it very vulnerable to extinction throughout its range. The reach of the Yellowstone River in the project vicinity provides habitat for adult migration, but spawning habitat is not present.

Impacts

No-Build Alternative

Under the No-Build Alternative, there would be no transportation improvement activities. Therefore, no impacts to fisheries would result.

Build Alternative

Contaminants

Increases in impervious surface area could contribute to the degradation of water quality in the Yellowstone River through the introduction of contaminants. The indirect effect of contaminant input into water bodies in the project area would be minimal because the proposed project would not substantially increase the area of impervious surfaces, and thus would not contribute to water quality degradation in the project vicinity, and the indirect effect to fisheries and aquatic insects is expected to be minimal.

Increased Water Temperature

There may be a minor and localized effect on water temperature as a result of increased impervious surface area and minor vegetation clearing under the proposed project. As discussed in Section 3.4.2, the Build Alternatives will result in an increase of impervious surface and the clearing of no more than approximately 0.1 ha (0.3 ac) of riparian vegetation. This would result in a minor effect on water temperature in the project vicinity and the effects to aquatic habitat would likely be minor and localized.

Riparian Vegetation

As discussed above, the Build Alternatives call for the removal of no more than approximately 0.1 ha (0.3 ac) of riparian vegetation in areas adjacent to the existing highway. The removal of riparian vegetation would reduce the potential for shading and the introduction of organic matter which create important habitat in the river. The effect to fish habitat as a result of vegetation removal will likely be minor and localized.

Mitigation

Although the impacts of the proposed project on aquatic species are expected to be minor, a number of mitigation measures will be implemented to ensure protection of fisheries during project implementation.

- The proposed project will be designed to minimize impacts to fisheries wherever practicable.
- MDT will incorporate a SWPPP and BMPs into construction of the proposed project.
- Sediment control during and following construction will be implemented. Measures to prevent sediment loading into the Yellowstone River may be needed should soil and debris run-off occur from construction equipment and from exposed, disturbed areas adjacent to the river during construction.
- Adhere to conditions of the Clean Water Act (CWA) 404 Permit and recommendation of SPA 124.

3.4.8 Threatened and Endangered Species

The Endangered Species Act (ESA) directs federal agencies to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the existence of any threatened, endangered, or candidate species, nor result in the destruction or modification of their critical habitat. Procedures outlined by the US Fish and Wildlife Service (USFWS) were followed in determining if any threatened, endangered, or candidate species occur in the vicinity of the proposed project, including agency consultation and a review of published and unpublished literature for threatened, endangered, and special status species.

According to initial correspondence with USFWS, the bald eagle was the only threatened species protected under the ESA that was potentially present in the project vicinity. The bald eagle has since been de-listed from the ESA and there are currently no threatened or endangered species present in the project vicinity (72 CFR 37346).

Impacts

No threatened or endangered species are present in the project vicinity. Therefore, no impacts to threatened and endangered species would result.

Mitigation

No adverse impacts to threatened or endangered species would occur; therefore, no mitigation is required.

3.4.9 Section 4(f) Resources

Section 4(f) of the 1966 Department of Transportation Act, which is codified at 49 USC Section 303, and FHWA regulations found at 23 CFR Section 771.135, prohibits FHWA from approving the use of land from a significant publicly owned public park, recreation area, or wildlife or waterfowl refuge, or any significant historic site, unless a determination is made that there is no feasible and prudent alternative to the use of land from the property and the action includes all appropriate planning to minimize harm to the property. The applicability of these provisions was assessed for the proposed project.

The proposed project is not near a publicly owned park, recreation area, or wildlife/waterfowl refuge. As discussed in Section 3.3.1, the public does use existing informal pedestrian trails to access the river from the road for fishing and other recreational activities. However, there are no legal fishing access sites in the project area that would be protected by Section 4(f).

There is one NRHP-listed and three NRHP-eligible sites in the project area that meet the definition of a 4(f) resource. These include 24PA988 (KPRK Radio Station), 24PA1078 (the Yellowstone River Highway Bridge), 24PA1120 (the Northern Pacific Railroad Grade and Bridge), and 24PA1185 (the Rainbow Motel), respectively.

Impacts

No-Build Alternative

There are no impacts to Section 4(f) resources under the No-Build Alternative.

Build Alternative

The KPRK Radio Station (24PA988) and the Rainbow Motel (24PA1185) are beyond the proposed construction limits and ROW of the proposed Build Alternatives. The shared approach to these properties would be modified and a portion of the parking area for the Rainbow Motel would be modified, but these facilities are within existing MDT ROW. Therefore, there is no Section 4(f) use of these sites.

The Northern Pacific Railroad Grade and Bridge (24PA1078) is also beyond the construction limits of the proposed Build Alternatives. Although negotiations with MRL may be required for a new easement on MRL ROW, there would be no impact to the railroad's existing alignment, the railroad grade, or the existing railroad bridge. Therefore, there is no Section 4(f) use of this site.

Both Build Alternatives would result in a Section 4(f) impact of the NRHP-eligible Yellowstone River Highway Bridge (24PA1078) (See Appendix E). Due to the sheer size of the bridge, the weight both with and without the concrete deck, its location, and the way the bridge was originally built, it is not a good candidate for the MDT Adopt-A-Bridge Program. It can not remain in place and it is not suitable for relocation. The Historic Roads and Bridges Programmatic Agreement [Section 3(E)(5)] has a provision in it to not put NRHP-eligible bridges up for adoption if they cannot be feasibly moved. Therefore, the bridge would be demolished as part of either of the Build Alternatives.

Despite its status as NRHP-eligible, the Yellowstone River Highway Bridge must perform as an integral part of a modern transportation system. MDT staff has identified the structure as being functionally obsolete (narrow) and in need of replacement. Therefore, the structure must be replaced in order to assure public safety while maintaining the transportation system continuity and integrity. The Nationwide Programmatic Section 4(f) Evaluation for Historic Roads and Bridges applies to the Yellowstone River Highway Bridge and provides standardized mitigation for impacts to historic highway bridges (see Appendix E).

Mitigation

Refer to Appendix E for the Nationwide Programmatic Section 4(f) Evaluation and mitigation for the Yellowstone River Highway Bridge (24PA1078).

3.5 CONSTRUCTION IMPACTS

The following discussion addresses potential temporary construction impacts as a result of the Build Alternatives and identifies mitigation measures to avoid, reduce, or eliminate adverse impacts. Construction activities would include bridge removal and replacement, use of temporary work bridges, excavation and grading, paving, and construction of retaining walls, a multi-use path, and drainage features. Construction of gravel parking areas could also occur if funding and ROW are available. Final construction methods would be addressed during development of the final construction plans. The sequencing of construction packages and construction time frame would also be addressed during development of final design plans. Mitigation measures would be incorporated into final construction to further minimize impacts to residents, businesses, and the traveling public.

3.5.1 No-Build Alternative

There would be no construction impacts associated with the No-Build Alternative.

3.5.2 Build Alternatives

The bridge construction methods and schedule for the Build Alternatives are one of the primary distinguishing factors between the two alternatives. Alternative 1 would be built in one phase and the construction duration would be approximately 15 months. However, MDT would not be able to maintain vehicular traffic on the bridge during approximately ten months of the estimated construction duration. For this reason, a traffic detour would be necessary under Alternative 1.

Alternative 2 would be constructed in two phases and would require approximately 27 months for construction. Two lanes of traffic (one in each direction) would remain open, but occasional one-lane traffic conditions or short duration road closures would occur. Because the duration of construction would be longer, all construction related impacts would occur for a longer period of time under Alternative 2.

Traffic

Interstate Traffic

The segment of US 89 through Livingston (and the project area) is used as a detour route for interstate traffic during I-90 closures. There are usually a few closures each year due to high winds and/or accidents. The vast majority of closures (approximately 99%) occur between mid-October and mid-March. The average duration of these closures is between four and six hours. The closures usually apply only to high profile vehicles but occasionally also apply to passenger vehicles. These closures do not apply to emergency vehicles. During I-90 closures, construction delays in the project area would likely create short-term impacts to interstate traffic circulation under either of the Build Alternatives.

Under Alternative 1, US 89 through the project area would not be available as a detour route if an I-90 closure occurs while the bridge is closed for construction. In this instance, high profile vehicles traveling westbound on I-90 would experience delays. Passenger vehicles traveling westbound on I-90 could be detoured at the Mission Interchange (Exit 340) instead of Exit 337 (See Figure 3.1). The alternate detour route would require passenger vehicles to travel north on US 89 from Exit 340, southwest on Old Clyde Park Road, south on Bennett Street, and west on US 89 (Park Street) through Livingston to reconnect with I-90 at Exit 333.

Under Alternative 2, US 89 through the project area would remain available for use as the detour route during I-90 closures.

Local Traffic

The pier type used in Alternative 1 would not allow MDT to construct the bridge in phases and therefore, the bridge would be closed to traffic. For this reason, this alternative would require that traffic be detoured for approximately ten months during construction of the new bridge. In order to gain access west of the bridge, westbound traffic would need to travel west on I-90 to Exit 333 at Park Avenue. Eastbound traffic from Livingston would need to access I-90 from Exit 333 and travel east on I-90 to Exit 337. The total detour length would be approximately 14.5 km (9 mi) and would add approximately 15 minutes of travel time. Construction delays would likely create short-term impacts to local traffic circulation in the project area due to the detour. Because traffic would be detoured for ten of the 15-month construction duration under Alternative 1, safety concerns related to moving traffic through the bridge construction zone would be an issue for approximately five months.

Under Alternative 2, two lanes of traffic on the bridge would remain open, but occasional one-lane traffic or road closures would occur. Construction delays would likely create short-term impacts to local and regional traffic circulation in the project area due to lane closures, delays, short-term travel on unpaved surfaces, and reduced travel speeds. Typical construction delays would be approximately 15 minutes long, but could be longer on occasion. Traffic diversions and construction equipment and activities close to the travel lanes would also affect speeds and traffic operation within the construction zone. Construction related impacts would occur for a longer period of time than under Alternative 1 due to the longer construction duration. Also, safety concerns related to moving traffic through the bridge construction zone would be an issue for the entire construction duration – approximately 27 months.

Mitigation

A construction traffic control plan will be developed according to MDT Standard Specifications. Since most I-90 closures occur during winter months (mid-October through mid-March), the bridge closure under Alternative 1 will be scheduled to avoid as many winter months as possible to minimize the potential for an I-90 closure to occur while the bridge is closed.

Access

Access to properties in the project area may be temporarily impacted by construction activities. Temporary access would be provided for the properties.

Mitigation

Early notification and coordination with adjacent property owners will occur. Accelerated bridge construction methods will be considered where practicable.

Pedestrians and Bicycles

Under both Build Alternatives, the bridge would be closed to pedestrians and bicycles during construction. This closure would last for approximately ten months under Alternative 1 and 27 months under Alternative 2. Under both alternatives, pedestrians and bicycles would have continued access through the Bennett Street intersection for most of the construction duration, but might experience short-term impacts while traveling within the project limits. However, impacts due to construction would not be vastly different than the current condition since there is currently no safe access for pedestrians provided on the bridge.

Mitigation

No mitigation is necessary.

Community Resources

Access for emergency services and school buses would be impacted during the construction period for both Build Alternatives. Under Alternative 1, the bridge would be closed to traffic for approximately ten months, during which time emergency vehicles would follow a 14.5 km (9 mi.) detour described above in the Traffic section. Construction of Alternative 2 would maintain two lanes of traffic for the majority of the construction duration. Traffic would experience occasional delays, one-lane traffic conditions, and short duration road closures due to construction activities.

River recreation in the project area would be impacted during the construction period under each of the Build Alternatives. Coordination between MDT and representatives of the angling community (see Section 5.3) identified construction-related safety concerns for boaters. Based on safety concerns identified during coordination with the angling community, MDT recommends closing access for floating through the construction site at the bridge. Coordination with the U.S. Army Corps of Engineers (COE) and the Montana Department of Fish, Wildlife and Parks (MFWP) would occur to implement this closure. Boaters would be required to pull out upstream at the Mayors Landing boat ramp. The next available put in is approximately 8 km (5 mi) downstream at the US 89 North Bridge (near the Shields River).

Mitigation

Coordination with emergency services and school districts will be undertaken prior to construction and will be included in the construction traffic control plan. Under Alternative 1, the ten-month bridge closure would be scheduled to minimize detour impacts on school bus travel.

MDT will coordinate with the COE and the MFWP regarding the recommended closure of the river through the project area during construction. MDT will also coordinate with the appropriate agencies to provide advance warning (notices, signs, etc.) about the river closure. Signing along the river will occur upstream of Mayor's Landing and at Mayor's Landing.

Local and Regional Economics

The Build Alternatives may impact businesses in the project area in the short-term due to delays or detours related to construction. The businesses located adjacent to the proposed project may be additionally inconvenienced during construction due to access limitations. Alternative 1 would require closing the bridge to vehicular traffic during construction. This would require motorists, including employees, customers, truckers, and other delivery personnel to drive the additional distance to detour around the bridge. Alternative 2 would not require a detour, but delays during construction would be expected, with their related time costs.

Outfitters, guides, and recreational related businesses (fishing, floating, rafting) would be impacted during the construction period under each alternative. As described in Section 2.2.2 and above under Community Resources, MDT proposes to close the river to travel and fishing within the project area for safety reasons. Safety concerns may also restrict public access (including fishing) near the bridge during specific construction phases of both Build Alternatives. The restrictions on recreational use of the river in the project area may also result in secondary adverse economic impacts to tourism-related businesses. Clients of river guides and outfitters may go to other areas. Businesses in Livingston that provide services to fishermen and boaters, such as restaurants and overnight lodgings, could be affected by reduced business. However, during construction, there would also be temporary beneficial economic impacts related to the demand for materials, services, and labor. There may also be indirect economic benefits related to spending by this construction labor force.

Mitigation

During construction, travel delays and access disruptions will be minimized to the extent practicable. MDT will work with agencies and interested groups, such as the Chamber of Commerce, to notify local and regional outfitters, guides, fishermen, and boaters about the construction schedule for the bridge and the related river closures.

Right-of-Way and Relocations

Construction permits for grading, temporary access, or temporary construction staging would be needed from property owners in the project area. With construction permits, the property owners would retain ownership of these areas; however, their use of these areas during construction would be restricted by particular construction activities. Upon completion of the project, the property owners would have unrestricted use of these areas again.

Mitigation

Early notification of affected property owners, on a property-by-property basis, of construction activities will occur in order to address potential construction impacts.

Contaminated Sites/Hazardous Materials

Contaminated ground water and soils associated with the BNLSC CECRA site would be encountered during construction of the proposed project. In addition, treated railroad ties and poles were used in some fencing along the northern side of US 89 within the project area. Solid waste was identified in the southeastern portion of the project area, which would be encountered during construction. Steel girders from the existing bridge are likely to have layers of lead-based paint.

Mitigation

Excavated soils and ground water may require special handling and disposal. A remediation/reclamation plan will be developed in consultation with MDEQ to address contaminated soils and ground water in the project area. Construction debris from removal of bridges and pavement will be handled as per MDT's *Standard Specifications for Road and Bridge Construction*.

Solid waste and treated railroad ties and fence posts encountered during implementation of the project will be addressed in accordance with MDT Standard Specifications and applicable federal regulations.

Disposal of the lead-based painted bridge girders will be addressed in accordance with MDT Standard Specifications and applicable federal regulations.

Cultural/Archaeological/Historical Resources

Impacts to cultural resources during construction may include impacts to historic resources from the temporary presence of construction equipment, noise, and fugitive dust (dust in the air). Additionally, access to these properties might be affected during the construction period from lane closures, detours, or construction permits. These impacts would be temporary. It is also possible that previously unidentified archaeological resources could be discovered during construction.

Mitigation

In accordance with MDT Standard Specifications, if cultural material is unexpectedly encountered during ground-disturbing activities in the project area, construction will cease immediately, and a qualified archeologist will be consulted to evaluate the significance of the cultural artifacts.

Noise

FHWA Technical Advisory T6160.2 contains requirements for the evaluation of roadway construction noise. If there is a possibility that construction noise would be a sensitive and contentious issue, MDT will comply with the above mentioned noise directive. The impact of roadway construction noise would be minor in this case, and the public did not raise construction noise as an issue at the public meeting. A representative of the KPRK radio station indicated that construction noise would not likely be an issue for their operations because they only broadcast one live program from the station and it is broadcast from a sound-proof room (KPRK 2007).

Mitigation

To minimize construction noise impacts on the local residents, contractors will adhere to local ordinances and BMPs to minimize noise impacts during construction.

Farmland

Temporary construction disturbance includes farmland that would experience temporary modification but would be returned to preconstruction conditions after construction of the project. These types of disturbances are temporary in nature and therefore would not permanently convert farmland to other uses.

Farm operations could be temporarily impacted by construction. Impacts would likely include disruptions to farm parcel accesses from road closures, detours, and presence of construction equipment or activities.

Mitigation

No mitigation necessary.

Visual Resources

Construction activities resulting in temporary impacts such as vegetation removal and the presence of construction equipment, stockpiles of materials, and dust emissions often create a conspicuous impact to the surrounding environment. Some impacts would be unavoidable, although they would only occur during the construction period.

Mitigation

Mitigation measures identified for Vegetation and Air Quality will reduce the visual impacts from construction.

Energy

Construction of a new bridge and roadway would require the expenditure of energy both for operation of construction equipment and machinery as well as the manufacturing of project components.

Mitigation

No mitigation necessary.

Floodplains – Executive Order 11988

Temporary construction disturbance includes areas of floodplain that would experience temporary modification of functions, but would be returned to their preconstruction condition after construction of the project. These types of disturbances are temporary in nature and therefore would not permanently alter the natural and beneficial values of floodplain areas in the project corridor.

As discussed below under Water Body Modifications, both Build Alternatives may require construction of coffer dams and work bridges. The temporary piers for the work bridge(s) would create flow impediments with potential increased backwater. Alternative 2 would require more piers in the water for a longer period of time during construction, resulting in greater temporary potential hydraulic impacts than under Alternative 1.

Mitigation

Park County Floodplain Development Permits will be required for the floodplain encroachment prior to construction. Coordination with the Park County Floodplain Administrator would be required to obtain a Floodplain Development Permit.

Water Resources/Quality

Disturbed areas created during construction can create land and water erosion and temporarily impact water quality. Spilled fuels or other hazardous materials may also cause impacts to water quality during construction. Stormwater runoff presents the potential for violations of water quality standards within the project area. In-stream work, which would be required for the bridge replacement, can contribute to sedimentation and introduction of pollutants.

Mitigation

An erosion and sediment control plan will be prepared and maintained in compliance with CWA Section 402/Montana Pollutant Discharge Elimination System (MPDES) regulations.

The contractor will be expected to adhere to MDT BMPs for erosion and sediment control and comply with applicable water quality regulations including CWA Section 404 and SPA 124.

Water Body Modifications

Both Build Alternatives may require construction of coffer dams for pier installation and removal and a work bridge alongside the existing bridge for access during construction. Alternative 2 would likely require two separate work bridges during construction. Alternative 1 would likely only require one work bridge and for less time than Alternative 2. Also, the phased construction of Alternative 2 would require that portions of the existing and new bridge structures would be present at the same time. Therefore, Alternative 2 would require more piers in the water for a longer period of time during construction than under Alternative 1.

These resulting temporary impacts to the Yellowstone River could include soil loss, wetland impacts, and sedimentation from erosion. These types of disturbances are temporary in nature and therefore would not permanently alter the natural condition of the water body.

Mitigation

An erosion and sediment control plan will be prepared and maintained in compliance with CWA Section 402/MPDES regulations.

The contractor will be expected to adhere to MDT BMPs for erosion and sediment control and comply with applicable water quality regulations including CWA Section 404 and SPA 124.

Wetlands

In addition to the permanent direct impacts to wetlands discussed in Section 3.4.4, temporary impacts to wetlands could occur due to physical disturbance from constructing the bridge and corresponding roadway approaches. Construction vehicle access to the bridge could result in temporary impacts to Wetlands A, C, and D (See Appendix A).

Stormwater runoff from construction activities could also occur. Issues would be similar to other water quality concerns regarding sedimentation, erosion, and introduction of pollutants.

Short-term indirect impacts to wetlands could include sedimentation and increases in non-native plant species.

Sedimentation could occur when areas adjacent to wetlands are left exposed as a result of cuts and fills. The filling of wetlands with sedimentation can increase flooding; however, this impact would most likely be localized, short term, and could be easily avoided in most cases.

The potential short-term establishment of noxious weeds and other invader species in the areas of construction disturbance could occur. These noxious vegetation types may become established in disturbed wetland areas until desirable vegetation is established. However, the wetlands are currently adjacent to an existing road and railroad and already experience some level of noxious weed invasion. Park County is responsible for maintaining the ROW in the project area, and spraying for noxious weeds usually occurs in the summer months before the plants have gone to seed. The project is therefore not anticipated to increase opportunistic noxious weeds and other invader species in the wetland areas.

Mitigation

Temporary impacts to wetlands will be minimized using BMPs and these areas of temporary disturbance will be restored to original condition after construction. Mitigation measures described under Water/Resources and Quality will minimize impacts to wetlands.

Vegetation

Short-term construction impacts would occur along the roadway, including temporary habitat and vegetation loss. These temporary impacts would vary by species type, depending on their recovery rates. The ultimate recovery of vegetation depends on the management of the area after construction. Other temporary direct impacts may include the modification of vegetation communities from fuel spills and solid compaction as a result of construction access and activities.

Mitigation

To reduce the spread and establishment of noxious weeds and to re-establish permanent vegetation, MDT will coordinate with the Park County Weed Supervisor to reclaim disturbed areas within MDT ROW and easements. These areas will be seeded from weed-free sources with desirable plant species, as recommended by the MDT Botanist. Revegetation will be conducted in accordance with MDT Standard Specifications. An erosion and sediment control plan will be prepared in compliance with CWA Section 402/MPDES regulations.

Wildlife and Migratory Birds

Montana Species of Special Concern

Construction activities are not expected to affect the long-billed curlew as habitat is not identified directly on the Yellowstone River. The closest habitat is 2.7 km (1.7 mi) from the construction area.

Short-term, construction-related direct impacts on bald eagles could include impacts to suitable perching, roosting, or nesting habitat from the removal or alteration of riparian habitat. The amount of vegetation that would be affected by the Build Alternatives, when compared to the availability of similar habitat that would remain along the Yellowstone River, is small and there are no documented roosts, nesting sites, or wintering activity in the area. Therefore, the effect on bald eagles would be minimal. Human-related disturbance, including visual and human caused noise disturbance, could also have a temporary effect on bald eagles in the project vicinity. However, since the proposed project is located adjacent to a railroad and surrounded by agricultural land and residences, transient bald eagles are likely accustomed to a human-related noise above ambient levels. Temporary displacement of bald eagle activity in the area would subside once construction is complete.

Urban and Rural Wildlife

Short-term construction-related impacts could include displacement of wildlife from human-related noise disturbance and water quality degradation from work in and near water bodies in the area. Noise produced by construction equipment on the proposed project would occur with varying intensity and duration during construction. Wildlife populations found in these areas are likely to be accustomed to periodic noise intrusions, due to roadway traffic, agricultural equipment, and noise from local residents, but some brief displacement of wildlife populations may occur during construction. Noise from construction may displace terrestrial wildlife temporarily, but they would likely return after construction is completed. Potential introduction of chemicals or runoff from construction activities into water bodies could impact wildlife species that rely on water bodies.

Migratory Birds

Short-term construction related impacts would be similar to those described for urban and rural wildlife.

Mitigation

Montana Species of Special Concern

No adverse impacts to long-billed curlew would occur; therefore, no mitigation is required.

Mitigation measures described under Water Resources/Quality will minimize impacts to bald eagle habitat.

Urban and Rural Wildlife

Mitigation measures described under Noise and Water Resources/Quality will minimize impacts to wildlife.

Migratory Birds

Mitigation measures described under Noise and Water Resources/Quality will minimize impacts to migratory birds.

Aquatic Species

Short-term construction-related impacts could include morbidity and displacement of fish or aquatic insects from construction activities, and additional sedimentation and turbidity as a result of work in and near the Yellowstone River within the project area. Construction activities are likely to create disturbances from operating construction equipment and could cause some brief displacement of fish in this water body; however, these fish would likely return after construction is complete.

Construction activities also have potential to increase sediment and turbidity levels in the Yellowstone River during and immediately following construction. Such increases could affect aquatic species within the area downstream of the construction area. Sediment released during construction can fill voids in downstream gravel, thereby reducing its suitability for spawning and the availability and abundance of benthic microinvertebrates. In the reach of the Yellowstone River in the project area, adult migration, spawning, and rearing habitats are all important seasonally to most of the fish species found in the area, with the exception of brook trout, mountain sucker, and Yellowstone cutthroat trout, which are not known to use this area extensively. Those species that spawn in the project area may be affected by sediment released during construction of the bridge. Potential sedimentation and turbidity increases resulting from clearing and grading activities are generally short-term and would subside following project completion.

Mitigation

Mitigation measures described under Water Resources/Quality will minimize impacts to aquatic species.

Threatened and Endangered Species

As described in Section 3.4.8, no threatened or endangered species are present in the project vicinity. Therefore, no impacts to threatened and endangered species would result.

Mitigation

No adverse impacts to threatened or endangered species would occur; therefore, no mitigation is required.

Air Quality

Air quality related to construction would be limited to short-term increases in fugitive dust (dust in the air) and mobile sources. Fugitive dust is airborne particulate matter that generally cannot reasonably be captured through a control device. Trucks and other earth-moving vehicles operating around the construction site would generate construction-related fugitive dust. The dust would be due primarily to particulate matter re-suspended by vehicle movement over paved and unpaved roads and other

surfaces, dirt tracked onto paved surfaces from unpaved areas at access points, material blown from uncovered haul trucks, and other earthmoving activities.

Carbon monoxide (CO) is the principal pollutant of concern when considering localized air quality impacts of motor vehicles. Because CO emissions from motor vehicles increase with decreasing vehicle speed, disruption of traffic during construction under Alternative 2 is likely to result in short-term increases to local CO concentrations. This type of impact would not be an issue under Alternative 1 because traffic would be detoured via I-90.

Mitigation

Fugitive dust and mobile source emissions will be minimized via adherence to MDT Standard Specifications, which will limit clearing and grubbing; specify re-seeding procedures; require use of water or chemical dust suppressant; require that contractors operate in compliance with air quality standards established by federal, state, and local agencies; and require the development of a construction traffic control plan, which will minimize disruption of traffic and associated engine idle time.

3.6 CUMULATIVE IMPACTS

Indirect effects anticipated from the proposed improvements are discussed under each applicable resource in Chapter 3.

Cumulative effects are those impacts that result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Generally, significant cumulative impacts result when (1) resources are vulnerable to cumulative effects (e.g., wetlands), (2) the same type of impact is occurring from multiple projects (e.g., multiple road construction projects), (3) effects have been historically significant for a resource (e.g., a non-attainment area for air quality), or (4) other analyses have identified cumulative effects as a concern in the project area. Examples of actions that were analyzed for cumulative effects include road construction, development, mining, and agricultural practices.

Historically, the Livingston area development has been based on railroads, mining, and agriculture. Cumulative impacts would include those from development and the railroads and other modes of transportation that provided the base for the Park County and Livingston economies through the 1980s.

To support the transportation activities, multiple bridges have been built across the Yellowstone River. Each provides a point of constraint for river flow, especially during floods. The Upper Yellowstone River Task Force recommended that scheduled reconstruction projects examine the costs and benefits of zero backwater standards. This cost/benefit relationship was studied when selecting the new bridge opening. Both Build Alternatives were sized to optimize the hydraulic performance of the bridge once the downstream railroad structure is replaced with a longer structure. However, until the railroad bridge, located 60 m (197 ft) downstream is replaced, the hydraulic gains will be minimal.

Other proposed transportation projects in the project vicinity that have been identified in the Statewide Transportation Improvement Plan (STIP) for 2004 – 2006 and/or 2006 – 2008 include:

- Intersection improvement at 5th Street and Park Street in Livingston:
This project would improve traffic flow on Park Street.

- Major rehabilitation (without added capacity) of US 89 (Park Street) through Livingston:
This project proposes to repave the roadway and widen a portion of the roadway to meet current standards and provide a bike path along the south side of US 89. The rehabilitation project would connect with the eastern and western project limits of this bridge project. The proposed bike path on the south side of the road would be from reference mile post (RP) 56.2 to 57.9.

In November and December of 2006, the City of Livingston approved annexation of two parcels on the east side of the Yellowstone River that have doubled the amount of land within City limits. The Yellowstone River, which previously bounded the City on the south and east, now flows through the City. Consequently, the project area, which was previously outside the urban area, is located within the City limits.

The Watson ranch property, which borders the east bank of the Yellowstone River south of US 89, is an agricultural parcel that is planned for development. No official development plans for the Watson Ranch property have been submitted to the City at this time. The Rustad Ranch property, which borders the east bank of the Yellowstone River north of US 89, is an agricultural parcel planned for a residential and commercial development called the Yellowstone Preserve. The *Yellowstone Preserve Livingston, Montana Traffic Impact Study* (TIS) dated March 2007 was conducted by Yellowstone Community Partners, LLC and submitted to MDT for consideration. This study indicated that the development would include 700 single-family units, 150 multi-family units, and 50,000 sq. ft. of commercial space for retail and office uses.

Traffic

Roadway projects are actions that can lead to an increase in traffic or change in traffic patterns. The transportation projects listed above are not likely to result in cumulative increases in traffic and changes in traffic patterns. Construction impacts associated with either of the Build Alternatives would be in addition to the above listed projects.

Development can also lead to an increase in traffic or change in traffic patterns. The potential for future residential, commercial, and light industrial development of the area along the east side of the Yellowstone River could have an impact on traffic volumes and patterns in the project area. The TIS that was prepared for the Yellowstone Preserve evaluated how the proposed development would impact traffic volumes and patterns on US 89. Based on the data provided in the TIS, the daily volume of traffic on US 89 (east of Bennett Street) in the year 2025 would be 9,279. The traffic volume projections in the TIS assume full build-out of the Yellowstone Preserve development by 2025, but do not account for the potential development of the Watson Ranch property. Any future development at the Watson Ranch property would result in additional traffic and therefore the cumulative traffic on US 89 would be greater than predicted in the TIS.

The TIS indicates that development will include two accesses to US 89, both with right and left turn lanes for vehicle storage on US 89. Based on the traffic volume projections in the report, the LOS for north/south movements at the main access would fall to LOS F by 2013 requiring signalization to maintain LOS A or LOS B through 2025. The same would be true of the secondary access by 2017. Although no information was provided in the TIS for the future LOS on US 89, the traffic projections based on full build-out of the development are substantially higher than the 3750 ADT projected by MDT for US 89 east of Bennett Street by the year 2030. As stated in Section 3.2.1, MDT's traffic volume projections do not reflect the volumes that might occur if or when the Yellowstone Preserve or the Watson Ranch properties are developed. However, MDT reviewed the TIS for the Yellowstone Preserve and determined that even with this substantial increase in traffic, both of the Build

Alternatives for this project would accommodate future traffic volumes on US 89 based on information provided in that report.

Based on the TIS information, MDT also considered the future LOS on US 89. Due to the planned development along US 89 east of the Yellowstone River, the project area will most likely change from a rural to an urban setting. The Highway Capacity Manual defines rural two-lane high speed facilities that typically carry long-distance trips as Class I roadways. Roadways that typically serve as a connection to Class I facilities in which there are short trips and reduced speeds and mobility are defined in the Highway Capacity Manual as Class II two-lane highways. The segment of US 89 through the project area would typically carry short trips generated from the expected development that would either access I-90 or the area of Livingston west of the Yellowstone River. In addition, this segment of US 89 would continue to serve as a connection between I-90 and the east side of Livingston. Once the planned development takes place, drivers on this facility would not necessarily expect to travel at high speeds and would tolerate a greater percentage of time following vehicles. Therefore, as this roadway develops into a Class II roadway, there would be no anticipated reduction in LOS even with the increased traffic volume and reduced speeds.

Pedestrian and Bicycles

The construction of the multi-use paths across the bridge and accommodation of multi-use paths under the bridge in the Build Alternatives would support the recommendations from the 2002 *Urban Design Framework Master Plan* and the *Livingston/Park County Trails Plan*. When the remainder of the multi-use network in these plans is implemented, there would be a beneficial cumulative impact from the improved multi-use connections to the area along the Yellowstone River.

Water Body Modifications

As discussed in Section 3.4.3, Water Body Modifications, the Governor's Upper Yellowstone River Task Force conducted an interdisciplinary study to assess the cumulative effects of bank stabilization, and natural and other channel modification on the physical, biological, and cultural attributes of the Upper Yellowstone River. The Final Report of the Task Force (December 2003) documented extensive areas of channel modification and confinement to the Yellowstone River in the Livingston area due to roads and bridges and through the use of dikes, levees, riprap, and jetties. Several recommendations were made by the Task Force that pertain to the proposed Yellowstone River Bridge replacement or to the portion of the Yellowstone River in the project area. These recommendations relate to lessening hydraulic impacts; removing the existing abutments, piers, and bridge approaches; minimizing upstream and downstream negative impacts of sedimentation and gravel deposition; and evaluating a zero backwater bridge design. The proposed project would comply with all of these recommendations.

Wetlands

Road and bridge construction, development activities, and past agricultural operations can be contributing factors to the loss of wetlands in the project area, and the proposed project is expected to contribute to these impacts. Cumulative effects to the loss of wetlands, including direct loss of wetlands and indirect effects of contamination, sedimentation, and reduced wetland functions, would likely occur from the transportation projects discussed above. Because agriculture is the primary land use in the study area, it is likely that agriculture is the primary reason for the loss of wetlands in the region historically; however, the past 20 years has seen a shift in this trend as development in and around Livingston increases. Expansion of the Livingston urban area into the project area is likely in the future given the recent annexation of the parcels on the east side of the Yellowstone River.

Development of these parcels from agricultural to urban land uses could contribute to direct and indirect wetland impacts.

MDT policy is to avoid and minimize impacts to wetlands, and if wetlands are impacted as a result of an individual highway project, MDT would mitigate for jurisdictional and non-jurisdictional wetlands. MDT attempts to mitigate wetland impacts within the same watershed where the impacts occurred. Thus, each individual MDT project identified above would mitigate for its own impacts. This project's contribution to these cumulative impacts would be negligible when compared to all other past and future contributing activities.

Vegetation

Road construction, development activities, and past agricultural operations can be contributing factors to the loss of vegetation and the introduction of noxious weeds, and the proposed project is expected to contribute to these impacts. While cumulative effects to the loss of vegetation and introduction of noxious weeds would likely occur from these activities, this project's contribution to these cumulative impacts would be minimal when compared to all other contributing activities.

Wildlife and Migratory Birds

Road construction, development activities, and past agricultural operations can be contributing factors to the decrease in the amount and diversity of wildlife and migratory bird species from fragmentation, alteration, and loss of habitat; water quality degradation; and increased mortality from conflicts with vehicles within the project area and outlying areas, and the proposed project is expected to contribute to these impacts. Cumulative impacts to habitat, water quality, and wildlife mortality could occur from these activities. This project's contribution to these cumulative impacts would be minimal because the additional roadway area represents a small change in the land use compared to the overall past, present, and future activities in the project area.

Aquatic Species

Road construction, development activities, and past agricultural operations can be contributing factors to the degradation of fish habitat in the Yellowstone River from contaminants, increased water temperature, and loss of riparian habitat, and the proposed project is expected to contribute to these impacts. While cumulative effects to the degradation of fish habitat would likely occur from these activities, this project's contribution to these cumulative impacts would be minimal because the proposed project represents a small proportion of the activities that contribute to the degradation of fish habitat compared to the overall past, present, and reasonably foreseeable future activities in the project area.

Mitigation

No mitigation is necessary

4.0 PERMITS AND AUTHORIZATIONS REQUIRED

The permits listed below may be required for the Build Alternatives:

- Clean Water Act (CWA) Section 402/Montana Pollutant Discharge Elimination System (MPDES) authorization from MDEQ Permitting and Compliance Division. The MPDES permit requires a storm water pollution prevention plan (SWPPP) that includes a temporary erosion and sediment control plan. The erosion and sediment control plan identifies BMPs, as well as site-specific measures to minimize erosion and prevent eroded sediment from leaving the work zone.
- CWA Section 404 permit from the US Army Corps of Engineers (COE) for any activities that may result in the discharge or placement of dredged or fill materials in waters of the US, including wetlands.
- Federal Rivers and Harbors Act (Section 10 Permit) from the US Army Corps of Engineers (COE) for any the construction of any structure in or over any federally listed navigable waters of the US.
- A Montana Department of Natural Resources and Conservation (MDNRC) land use license or easement application and the Application for Licensing Structures & Improvements on Navigable Water Bodies (Form DS 432) for the construction, placement, or modification of a structure or improvements in, over, below, or above a navigable stream.
- Montana Stream Protection Act (SPA 124) from the MFWP-Fisheries Division. The Montana SPA 124 is required for projects that may affect the bed or banks of any stream in Montana.
- Short-Term Water Quality Standard for Turbidity related to construction activity (318 Authorization) from the MDEQ-Water Quality Bureau for any activities that may cause unavoidable violations of state surface water quality standards for turbidity, total dissolved solids, or temperature.
- Floodplain Development Permit from the Park County Floodplain Administrator.

In addition to the permits listed above, the following compliance is required:

- Compliance with mitigation stipulations of the Programmatic Agreement for Nationwide Section 4(f) Evaluation for Historic Bridges.

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5.0 COMMENTS AND COORDINATION

5.1 AGENCY CONSULTATION

The following agencies and organizations were contacted via a letter at the beginning of the study process and were asked to provide information. These agencies and organizations were also provided an opportunity to comment on the proposed project:

- City of Livingston
- Department of Environmental Quality
- Montana Department of Natural Resources and Conservation
- Montana Fish, Wildlife and Parks (*124 SPA*)
- Montana Natural Heritage Program
- Montana Rail Link
- Montana State Historic Preservation Office
- Park County
- U.S. Army Corps of Engineers (*Clean Water Act - Section 404* permit; Federal Rivers and Harbors Act (Section 10 permit))
- U.S. Department of Agriculture (USDA) - Natural Resources Conservation Service
- U.S. Fish & Wildlife Service

Responses from these agencies and organizations are provided in Appendix D.

5.2 COOPERATING AGENCIES

Of the agencies listed above, five were requested and accepted as cooperating agencies. Cooperating agencies are those that assist in the review process of the Environmental Assessment. These agencies help to determine and review the issues that need to be addressed during the environmental documentation process and how to mitigate impacts to environmental resources that may result from the project. The following agencies are those that agreed to be the cooperating agencies for this project:

- U.S. Army Corps of Engineers
- Montana Department of Natural Resources and Conservation
- Montana Fish, Wildlife and Parks
- Park County, Montana
- City of Livingston

5.3 PUBLIC INVOLVEMENT

Public scoping for this project included a public meeting, establishing the Yellowstone Bridge Advisory Committee, and conducting stakeholder interviews. A public meeting was held on December 16, 2003 in Livingston. The meeting was attended by 31 members of the community, and MDT presented information about the project and got feedback from the community about issues and concerns related to the proposed project. The community was generally supportive of the proposed replacement of the existing bridge and provided input to MDT on the desired design and aesthetics of the bridge. Several members of the community requested that the project follow the recommendations provided in The City of Livingston's *Urban Design Framework Master Plan* as well as the recommendations of the Governor's Upper Yellowstone River Task Force. A summary of this meeting is on file with MDT and available from the Butte District office or the MDT headquarters in Helena.

The Advisory Committee provided guidance to the project team on important local and regional issues in the project area and served as liaisons between the project team and the community. The Advisory Committee members represented a broad spectrum of stakeholders including local officials, staff from city and county departments, and representatives of local and regional organizations. The Advisory Committee played a vital role in helping to identify key community issues and helping to engage the public in the planning process.

The project team met with three stakeholder groups in October 2003 in order to inform community representatives about the EA process, discuss issues related to the project, and obtain input on how to engage particular stakeholders in the process. The first meeting was held with representatives of the angling community. Issues discussed included problems with the existing bridge, flooding and backwater concerns, issues related to the construction process, and design considerations for anglers and floaters. Input was also provided as to how to reach the broader angling community to disseminate information during bridge construction. A second meeting was held with the East Park Street business owners. This group discussed their expectations for improvements to the bridge, funding sources, and safety issues. The project team also met with the Livingston Patterns group. This group provided suggestions as to how to best reach local community members. The group also discussed design considerations, environmental issues, and the need for coordination with the railroad.

MDT staff met also with the Greenways and Trails Task Force on March 9, 2006 to discuss the objectives of the Task Force and how this project might accommodate trails planned in and around the project area. Planned trails in proximity to the project area include trails along the Yellowstone River and a trail along the north side of US 89 from Livingston and across the proposed bridge.

5.4 OPPORTUNITIES FOR COMMENTS

Copies of this Environmental Assessment are available to review at the following locations:

- Livingston/Park County Public Library, 228 W. Callender St., Livingston
- Park County Planning Office, 414 East Callender St., Livingston
- City of Livingston Planning Office, 330 N. Bennett St., Livingston
- MDT Butte District Office, 3751 Wynne, Butte
- MDT Environmental Services Office, 2701 Prospect Ave., Helena
- MDT Bozeman Area Office, 907 N. Rouse, Bozeman
- Bozeman Public Library, 626 East Main, Bozeman
- MDT website at: www.mdt.mt.gov/pubinvolve/eis_ea.shtml

Written comments related to this document will be accepted during the Public Comment Period specified on the cover page. These comments as well as responses to these comments will be made available to the public. Please direct comments to:

Tom Martin, P.E.
Environmental Services Bureau Chief
Montana Department of Transportation
2701 Prospect Avenue
P.O. Box 201001
Helena, MT 59260-1001
Email address: tomartin@mt.gov
Fax number: 406-444-6253

MDT attempts to provide accommodation for any known disability that may interfere with a person participating in any service, program or activity of the Dept. Alternative accessible formats of this information will be provided upon request. For further information, call 406-444-7228 or TTY (800-335-7592), or call Montana Relay at 711.

Comments can also be submitted on the MDT website at:
www.mdt.mt.gov/pubinvolve/eis_ea.shtml

6.0 LIST OF PREPARERS

The following is a list of the project team that participated in the environmental documentation process for the Yellowstone River - NE of Livingston EA.

6.1 PREPARERS

David Evans and Associates, Inc.

Prepared environmental documentation and led the public involvement.

- Debra Perkins-Smith, AICP, Consultant Team Project Manager
- Laura Meyer, AICP, Senior Environmental Planner
- Chad Ricklefs, AICP, Senior Environmental Planner
- Terry Ruiters, Esq., Environmental Planner
- Kara Showalter, Environmental Planner
- Perry Palmer, Landscape Architect
- David Armes, Biologist

Bionomics Environmental

- David Aspitarte, Noise Modeling

Ethnoscience, Inc.

- John Pouley, Cultural Resource Inventory

Hyalite Environmental, LLP

- Chris Thelen, P.E.,
- Carol Lee-Roark, Ph.D., P.G.

6.2 REVIEWERS

Montana Department of Transportation

- Tom S. Martin, P.E., Environmental Services Bureau Chief
- Thomas Gocksch, P.E., Environmental Services Project Manager
- Kent M. Barnes, P.E., Bridge Engineer
- Roger Schultz, Road Design
- Bryan Miller, P.E., Bridge Area Engineer
- Tracy Stoner, P.E., Bridge Designer
- Walter Ludlow, Hydraulics Designer
- John Horton, Right-of-Way
- Scott Helm, P.G., Geotechnical Designer
- Deborah Wambach, Biologist
- Stan Sternberg, Environmental Services

Montana Department of Transportation – Butte District

- Jeff Ebert, P.E., District Administrator

Federal Highway Administration

- Ted Burch, P.E., Field Project Operations Engineer
- Jeff Patten, Operations Engineer

City of Livingston

- Clint Tinsley, Public Works Department Director

Park County

- Ed Hillman, Roads Department Supervisor

7.0 DISTRIBUTION LIST

7.1 FEDERAL AGENCIES

US Army Corps of Engineers

Helena Regulatory Office
c/o Montana Department of Natural Resources and Conservation
10 West 15th Street, Suite 2200
Helena, MT 59626
Mr. Allen Steinle, Montana Program Manager

US Department of Agriculture – Natural Resource Conservation Service

Federal Building, Room 443
10 East Babcock Street
Bozeman, MT 59715
Mr. Dave White, State Conservationist

US Department of Agriculture – Natural Resource Conservation Service

Livingston Service Center
5242 US Highway 89 South
Livingston, MT 59047-9611
Mr. Ron Hoagland, District Conservationist

US Fish and Wildlife

Montana Field Office
585 Shepard Way
Helena, MT 59601
Mr. R. Mark Wilson, Field Supervisor

7.2 STATE AGENCIES

Montana Department of Environmental Quality

Permitting and Compliance Division, Lee Metcalf Building
1520 East Sixth Avenue
PO Box 200901
Helena, MT 59620-0901
Mr. Tom Ellerhoff, Science Program Manager

Montana Department of Environmental Quality

Watershed Protection Section
1520 East Sixth Avenue
PO Box 200901
Helena, MT 59620-0901
Mr. Mark Kelley, Water Quality Coordinator

Montana Natural Heritage Program

Montana State Library
1515 East Sixth Avenue
Helena, MT 59620
Ms. Sue Crispin, Director

Montana Department of Natural Resources and Conservation

2273 Boot Hill Court, Suite 110
Bozeman, MT 59715
Mr. Scott Compton, Regional Manager

Montana Fish, Wildlife and Parks

1400 South 19th Street
Bozeman, MT 59715
Mr. Patrick Flowers, Regional Supervisor

Montana State Historic Preservation Office

225 North Roberts Street
PO Box 201201
Helena, MT 59620
Mr. Mark Baumler, State Historic Preservation Officer

7.3 LOCAL AGENCIES

Park County Commissioners

414 East Callender Street
Livingston, MT 59047
Mr. Larry Lahren, Chairman

Park County – Road Department

414 E. Callender Street
Livingston, MT 59047
Mr. Ed Hillman, Supervisor

City of Livingston

414 East Callender Street
Livingston, MT 59047
Mr. Edwin Meece, City Manager

City of Livingston – Public Utilities Department

330 North Bennett Street
Livingston, MT 59047
Mr. Clint Tinsley, Public Works Director

7.4 OTHER ORGANIZATIONS

Montana Rail Link

PO Box 16390
Missoula, MT 59808
Mr. Steve Werner

7.5 YELLOWSTONE BRIDGE ADVISORY COMMITTEE

City of Livingston – City Commission

414 East Callender Street
Livingston, MT 59047
Mr. Steve Caldwell, City Commissioner - Chairman

Park County Commissioners

414 East Callender Street
Livingston, MT 59047
Mr. Jim Durgan, County Commissioner

Park County Board of Realtors

125 E. Callender Street
Livingston, MT 59047
Ms. Michelle Goodwine

Livingston Area Chamber of Commerce

123 S. Main Street
Livingston, MT 59047
Ms. Lou Anne Nelson, Office Manager

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8.0 LIST OF SOURCES/DOCUMENTS

City of Livingston, March 1995. *Livingston Comprehensive Plan*.

City of Livingston, July 2002. *Urban Design Framework Master Plan*.

City of Livingston, February 2003. *Livingston Patterns Downtown*.

David Evans and Associates, June, 2005. Yellowstone Bridge NE of Livingston Biological Resources Report.

David Evans and Associates, November, 2006. Yellowstone Bridge NE of Livingston Biological Resources Report Addendum.

Ethnoscience, May 2003. A Cultural Resource Inventory of the Yellowstone River Northeast of Livingston Project.

Federal Register, Volume 47, No. 131, July 8, 1982. *Rules and Regulation*.

FEMA Firm Digital Mapping for Yellowstone County, Montana.

Governor's Upper Yellowstone River Task Force, August 2003. *Recommendations*.

HKM Engineering, January 21, 2004. *Preliminary Hydraulics Report* (Draft).

Hyalite Environmental, May 2003. Hazardous Materials and Water Quality Report.

Montana Department of Environmental Quality, 2003. *Burlington Northern Livingston Shop Complex Summary Page*, retrieved April 29, 2003 from http://www.deq.state.mt.us/Rem/hwc/Srs/Site_Summaries?CECRA/BNLV.asp

Montana Department of Transportation. Standard Specifications for Road and Bridge Construction.

Montana Department of Transportation, September 15, 2006. *Alignment and Grade Review Report*.

Montana Department of Transportation, August 2006. Microstation Design Files.

Montana Department of Transportation, June 1, 2005. *Bridge Size, Type and Location Parameters*.

Montana Department of Transportation. May 10, 2004. *Preliminary Traffic Study*.

Montana Department of Transportation, February 20, 2004. *Preliminary Bridge Opening Recommendation*.

Montana Department of Transportation, October 15, 2002. *Location Hydraulic Study Report*.

Montana Department of Transportation. June 3, 2002. *Preliminary Field Review Report*.

Montana Department of Transportation. April 12, 2002. *Preliminary Geotechnical Evaluation*.

Montana Department of Transportation, June 2001. Traffic Noise Analysis and Abatement: Policy and Procedure Manual.

Trails and Greenways Task Force, November 2006. *Livingston/Park County Trails Plan*.

Park County, March 1998. Park County Comprehensive Plan.

Park County, 2006. *Park County Growth Policy* (Draft).

US Department of Agriculture – National Agricultural Statistics Service, 2000. *Census of Agriculture*.
<http://www.nass.usda.gov/census/census02/volume1/mt/index2.htm>

US Department of Agriculture. NRCS Soil Survey Geographic (SSURGO) Database
<http://www.ncgc.nrcs.usda.gov/products/datasets/ssurgo/>

US Environmental Protection Agency, 2003, *Burlington Northern Livingston – U.S. EPA Region 8*,
retrieved April 28, 2003 from http://www.epa.gov/region8/superfund/sites/mt/burlington_.html

U.S. Department of Transportation Federal Highway Administration, February 3, 2006. *Interim Guidance on Air Toxic Analysis in NEPA Documents*.

Websites Referenced

<http://www.census.gov/> (US Census Bureau)

<http://www.census.gov/econ/census02/> (US Census Bureau Economic Census)

<http://maps2.nris.mt.gov/mapper> (Montana Natural Resource Information System Digital Atlas of Montana)

<http://mt.gov/revenue/> (Montana Department of Revenue)

<http://www.naco.org> (County Profiles, National Association of Counties, NACO)

<http://nhp.nris.state.mt.us/> (Montana Natural Heritage Program)

<http://mbmggwic.mtech.edu> (Ground Water Information Center (GWIC), Montana Bureau of Mines and Geology)

Personal Communication

Gocksch, Thomas, 2007. email communication with MDT on May 8, 2007 titled *Traffic data E of Livingston*.

Hammer, Bill, 2003. personal communication with MDEQ site project officer concerning underground storage tanks and leaking underground storage tanks in Livingston.

Kuhn, Jeff, 2003. personal communication with MDEQ site project officer concerning underground storage tanks and leaking underground storage tanks in Livingston.

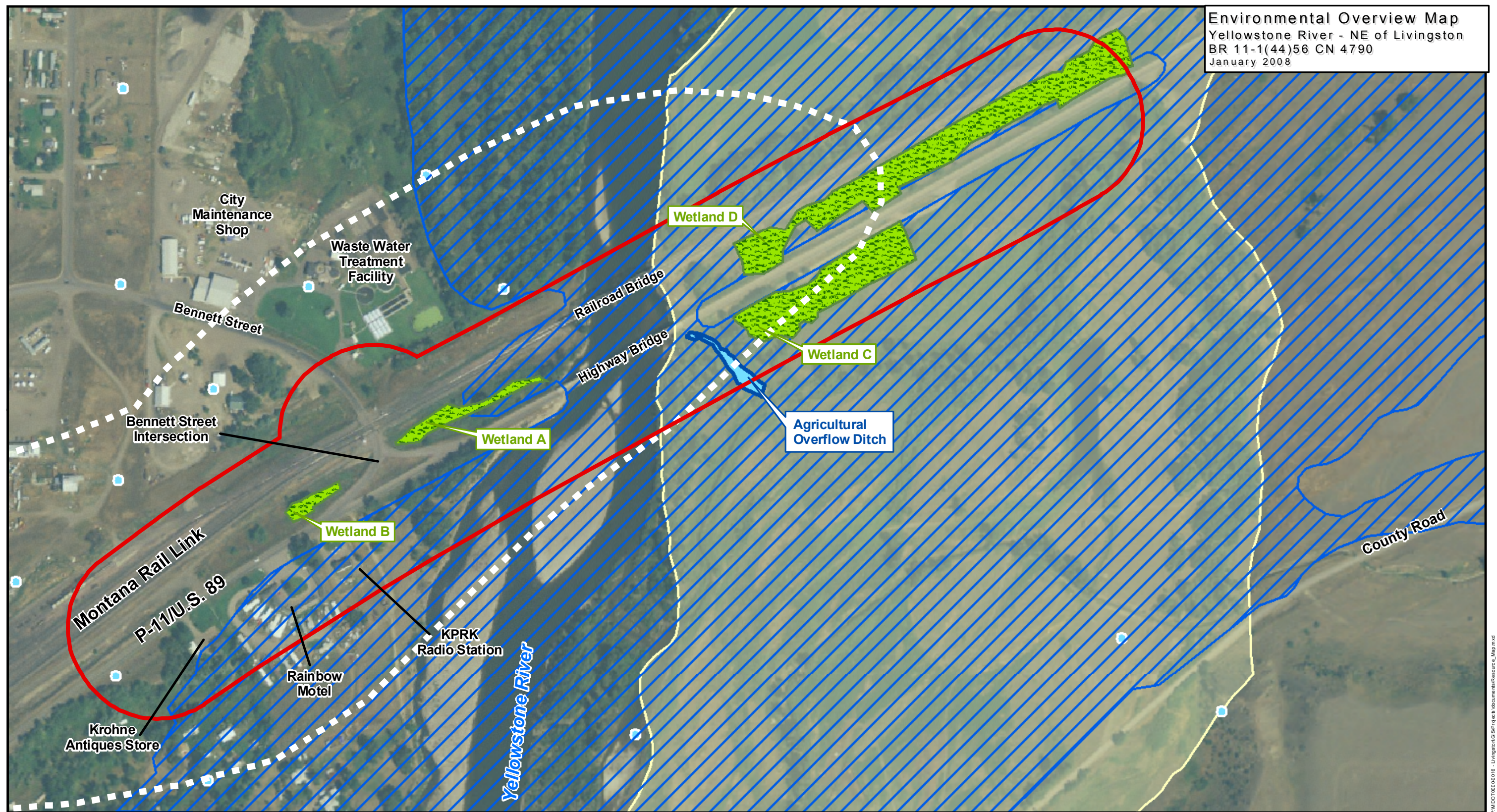
KPRK Radio, 2007. personal communication with KPRK representative regarding construction noise.

Montana Travertine, 2003. personal communication.

Woodhul, Jim, 2007. personal communication with Livingston Planning Department regarding annexation of land east of the Yellowstone River.

APPENDICES

Appendix A Environmental Overview Map

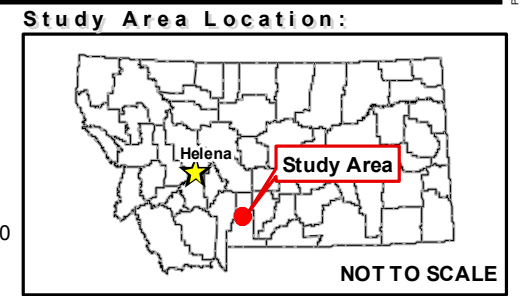
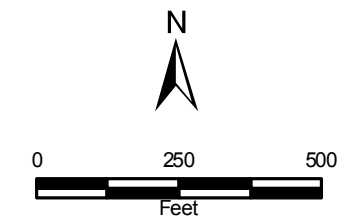


Legend

Study Area	Groundwater Source
Important Farmland	Agricultural Ditch
VOC Groundwater Plume	Wetlands
	100-Year Regulatory Floodplain



Data Sources:
Aerial Photography (USDA-Farm Services Agency Aerial Photography Field Office, 2005)
Base Map Data (Montana Natural Resource Information System, 2000)
FEMA Floodplains (Park County, Montana Unincorporated Area Flood Insurance Rate Community Map Panel Numbers 3001600011A & 3001600014A, 1987)
Groundwater Sources (Ground-Water Information Center, 2004)
Important Farmlands (Montana Natural Resource Conservation Service, 2003)
Public Water Supply (Montana Department of Environmental Quality, 2004)
VOC Plume - 5.0 µg/L estimated isoconcentration for PCE cleanup (Montana Department of Environmental Quality, November 2007)
Wetlands (DEA- GPS Survey, 2003&2006)



Appendix B Farmland Conversion Impact Rating



**DAVID EVANS
AND ASSOCIATES INC.**

October 19, 2006

Mr. Tony Rolfes
USDA - Natural Resource Conservation Service
Bozeman Area Office
3710 Fallon St., Suite B
Bozeman, MT 59718
(406) 522-4023

**SUBJECT: YELLOWSTONE RIVER NE OF LIVINGSTON ENVIRONMENTAL ASSESSMENT
BR 11-1(44)56 C.N. 4790
USDA NRCS-CPA-106 Farmland Conversion Impact Rating Form**

Dear Mr. Rolfes:

Please find the enclosed USDA NRCS CPA-106 Farmland Conversion Impact Rating Form for Corridor Type Projects and supporting documentation containing data prepared for the referenced project. David Evans and Associates, Inc. is managing the project for the Montana Department of Transportation (MDT). We will be coordinating the completion of the USDA NRCS CPA-106 Form through the Bozeman Area Office, as indicated in October 18, 2005 phone correspondence.

The proposed project is located in Park County on State Primary Route 11/US 89 (US 89) at mile post (MP) 55.94. The proposed project limits include the existing Yellowstone River Bridge, the roadway approaches approximately 0.4 km (0.25 mi) east and west of the bridge, and Bennett Street from the intersection with US 89 to the Montana Rail Link (MRL) railroad tracks.

The proposed project would replace the Yellowstone River Bridge, reconstruct the roadway approaches to the bridge, add two new parking areas on the south side of US 89, and would reconstruct the US 89 and Bennett Street intersection. The new bridge would have wider travel lanes and shoulders and a multi-use path on the south side of the bridge deck. The reconstructed roadway approaches would also include wider shoulders. The new bridge would be substantially longer than the existing bridge allowing for multi-use paths to be constructed under the bridge on each side of the river.

Two build alternatives will be presented in the Environmental Assessment (EA): The Straight Structure with I-90 Detour (Alternative A) and the Skewed Structure with Phased Construction (Alternative B). Both alternatives would include the following improvements:

Bridge Elements

- 3.6 m (12 ft) travel lanes (one in each direction)
- 2.4 m (8 ft) shoulders
- horizontal alignment shifted downstream (by 7.6 m (25 ft))
- vertical alignment raised to match the existing clearance



Roadway Elements

- variable width shoulders
- two parking areas; one off the southwest side of the bridge and one off the southeast side of the bridge

Pedestrian Elements

- 3 m (10 ft) pedestrian and bicycle pathway on south side of bridge deck separated from the travel lanes by a traffic barrier (the pathway would extend to the parking areas east and west of the bridge).
- 3 m (10 ft) unimproved pathway under the bridge

The only differences between the two alternatives lie in their superstructure design, pier design, and construction approach. The roadway right-of-way (ROW) that would be required for each of these alternatives is identical. The two build alternatives that will be presented in the EA and are included on the impact rating form include:

Yellowstone River NE of Livingston EA – NRCS-CPA-106 Form

Alternative A – Straight Structure with I-90 Detour

Alternative B – Skewed Structure with Phased Construction

I have provided hard copy documentation, as well as supporting Geographic Information System (GIS) digital data for use in your review of this project. A description of supporting documentation follows:

Documentation	Description
<i>NRCS-CPA-106 Form</i>	NRCS-CPA-106 Form for Yellowstone River NE of Livingston project corridor including ratings for two site alternatives
<i>Detailed Assessment</i>	A detailed account of analysis performed to obtain ratings related to NRCS-CPA-106
GIS Digital Data	Description
<i>ExistingMDTROW.shp</i>	Existing highway right-of-way
<i>NonUrban.shp</i>	Non-urban areas within 1-mile radius of project corridor
<i>Farmland_LocalImportance.shp</i>	Farmland of Local Importance
<i>ProposedROW.shp</i>	Proposed right-of-way (same for Alternative A and B)
<i>Farmland_Impacts.shp</i>	Impacts to Farmland of Local Importance (same for Alternative A and B)

Please feel free to contact me at (720) 946-0969 if you have any questions or concerns about this information. Thank you for your time and assistance.

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.

Laura Meyer, AICP, DEA
Project Manager

Mr. Tony Rolfes
Page 3



Copies: Jean Riley, MDT
Ron Hoagland, USDA NRCS Livingston Service Center
File

Attachments/Enclosures: NRCS-USDA-CPA-106 Farmland Conversion Impact Rating
Supporting documentation for calculations
CD with supporting data

Initials: KAS
File Name: P:\MDOT0000-0016 - Livingston\Planning\Farmlands\CPA106_coverletter.doc
Project Number: BR 11-1(44)56 C.N. 4790

**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request	4. Sheet 1 of <u>1</u>
1. Name of Project Yellowstone River NE of Livingston EA		5. Federal Agency Involved Montana Department of Transportation	
2. Type of Project Bridge Replacement		6. County and State Park County, MT	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 10/19/06	2. Person Completing Form Tony Rolles
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated 70,700	Average Farm Size 1,607 Acres
5. Major Crop(s) Irrigated Hay, Non-Irrigated Hay, Wheat	6. Farmable Land in Government Jurisdiction Acres: 319,598 % 42	7. Amount of Farmland As Defined in FPPA Acres: 39,114 % 5	
8. Name Of Land Evaluation System Used LESA	9. Name of Local Site Assessment System N/A	10. Date Land Evaluation Returned by NRCS 11/15/06	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	0.42	0.42		
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0.00	0.00		
C. Total Acres In Corridor	0.42	0.42	0	0

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0	0		
B. Total Acres Statewide And Local Important Farmland	0.42	0.42		
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.00001	0.00001		
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	23	23		
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)				
	48	48		

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points			
1. Area in Nonurban Use	15	11	11		
2. Perimeter in Nonurban Use	10	5	5		
3. Percent Of Corridor Being Farmed	20	0	0		
4. Protection Provided By State And Local Government	20	0	0		
5. Size of Present Farm Unit Compared To Average	10	0	0		
6. Creation Of Nonfarmable Farmland	25	0	0		
7. Availability Of Farm Support Services	5	0	0		
8. On-Farm Investments	20	0	0		
9. Effects Of Conversion On Farm Support Services	25	0	0		
10. Compatibility With Existing Agricultural Use	10	0	0		
TOTAL CORRIDOR ASSESSMENT POINTS	160	16	16	0	0

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	48	48		
Total Corridor Assessment (From Part VI above or a local site assessment)	160	16	16	0	0
TOTAL POINTS (Total of above 2 lines)	260	64	64	0	0

1. Corridor Selected: Alternative 1	2. Total Acres of Farmlands to be Converted by Project: 0.42 Acres	3. Date Of Selection: 01/07	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
---	--	---------------------------------------	---

5. Reason For Selection:

The single-shaft piers in Alternative 1 would provide better hydraulic performance long-term than Alternative 2 (double-shaft piers). Alternative 1 would also provide a shorter construction duration.

Signature of Person Completing this Part: 

DATE **1/29/07**

NOTE: Complete a form for each segment with more than one Alternate Corridor

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

- (1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

- (2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

- (3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

- (4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points
Site is not protected - 0 points

- (5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)

As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

- (6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

- (7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

- (8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

- (9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

- (10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

NRCS-CPA106 Corridor-Type Assessment Criteria Detailed Assessment

Alternative A = Straight Structure with I-90 Detour

- Superstructure Design: Four-span, haunched steel girder bridge with an estimated length of 216 m (709 ft)
- Pier Design: Three single-drilled shaft piers (non-skewed)
- Horizontal Alignment: Shifted 7.6 m (25 ft) downstream (to the north), parallel with existing alignment
- Vertical Alignment: Slightly raised to match the existing clearance
- Pedestrian/Bicycle Elements: Pathway separated from travel lanes by barrier
- Construction: Existing bridge closed—traffic detoured via I-90 for 8 months

Alternative B = Skewed Structure with Phased Construction

- Superstructure Design: Four-span, prismatic steel girder bridge with an estimated length of 205 m (673 ft)
- Pier Design: Three single-drilled shaft piers (non-skewed)
- Horizontal Alignment: Shifted 7.6 m (25 ft) downstream (to the north), parallel with existing alignment
- Vertical Alignment: Slightly raised to match the existing clearance
- Piers: Three double shaft piers (skewed 30 degrees from alignment)
- Pedestrian/Bicycle Elements: Pathway separated from travel lanes by barrier
- Construction: Phased construction—two lanes open on bridge during construction

- 1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

Alternative	Total Area within 1-mile radius of project area (ac)	Nonurban area within 1-mile radius (ac)	% of Area that is nonurban
A and B	2892.62	2065.11	71.40%

70% to 74% is assigned 11 points

- 2) How much of the perimeter of the site borders on land in nonurban use?

Alternative	Total perimeter (ft)	Perimeter bordering nonurban land (ft)	% of perimeter bordering nonurban land
A and B	7288.38	3759.84	51.59%

50% to 57% is assigned 5 points

- 3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

Alternative	Total area of project area (ac)	Total farmed area (ac)	% of the site farmed
A and B	2.28	0.43	18.86%

Less than 20% is assigned 0 points

- 4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Per conversation with Tony Rolfes, Bozeman NRCS Area Office, on October 19, 2006, the site is not covered by any local government policies or programs, or private programs designed to protect farmland. **A point value of 0 is assigned.**

- 5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County?

Alternative	Average size farm in County (ac)	Average impacted farm size (ac)	% of average-size farm in the County
A,B,C,D	1607.00	82.86	5.16%

50% or below county average is assigned 0 points

- 6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

If any of the two sites are chosen, the rest off the agricultural land not including the site will remain farmable. **Therefore, a point value of 0 (for 5% or less) is assigned.**

- 7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available to farmers on the site. **A point value of 5 (for 100% of services available) is assigned.**

- 8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

From aerial photo observation, no substantial farm investments or agricultural facilities exist on the proposed sites. **A point value of 0 (for 0 to 4% of on-farm investment) is assigned.**

- 9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

There would be no significant reduction in demand for support services if the site is converted and the viability of the remaining farms in the area would not be threatened. **A point value of 0 is assigned.**

- 10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

The existing bridge, which the proposed project would demolish and replace with a slightly wider structure, has been entirely compatible with agricultural uses. The proposed project would continue to be fully compatible with agricultural uses and would not contribute to the eventual conversion of the surrounding farmland to nonagricultural uses. **A point value of 0 is assigned.**

United States Department of Agriculture



Natural Resources Conservation Service
3710 Fallon St., Suite B
Bozeman, MT 59718

FILE COPY*Laura
File*

Subject: Response to Important Farmlands Inquiry
Yellowstone River – NE Livingston
BR11-1(44)56 CN 4790

Date: 4/21/02

To: Laura Hunter
David Evans and Associates
1331 17th Street
Suite 900
Denver, Colorado 80202

Enclosed is a draft copy of the Park County Soil Survey Map covering the project area you requested. As you are aware the soil survey is not completed for Park County, so all information supplied is preliminary and in draft format. As the soil survey map displays there are two soil map units in the project area, 602A and 720B. 720B is farmland of local importance, and 602A does not make any of the "important farmlands" classifications.

Please work with the Livingston NRCS Field Office if you find that your project will have a farmland conversion impact to important farmlands in this area. Including completion of Form AD-1006. The Livingston NRCS Field Office address is 5242 Highway 89 South, Livingston, MT 59047-9611. The phone number is 406 222-2899

If you have any questions concerning the soils of this area please feel free to contact me, 406 522- 4023, or email tony.rolfes@mt.usda.gov

A handwritten signature in dark ink, appearing to read "Tony Rolfes", followed by a horizontal line.

TONY ROLFES
RESOURCE SOIL SCIENTIST

REC'D APR 28 2003

Enclosure

Cc:

Tom Pick, Water Quality Specialist, NRCS Bozeman, MT
Ron Hoagland, District Conservationist, NRCS Livingston, MT

ADVANCE COPY SUBJECT TO CHANGE



Appendix C Cultural Resources

Cultural Resource Inventory (2003)

Site Number	Name of Cultural Site	Description	NRHP Status	Data Source
Site 24PA988	KPRK Radio Station	Previously recorded site. Built in 1947 in the <i>Moderne</i> architectural style.	Listed in 1979 under Criterion C	Original fieldwork in 1975. Current fieldwork in 2003.
Site 24PA1078 Update	Yellowstone River Highway Bridge	Previously recorded site with update. Five-span steel girder and floor beam structure built without use of a crane. Not included on MDT's Roads and Bridges Historic Preservation Plan.	Eligible under Criteria A and C	Original fieldwork in 1995. Current fieldwork in 2003.
Site 24PA1120 Update	Railroad Grade and Railroad Bridge	Previously recorded site with update to include bridge. Railroad bridge built in 1918 and railroad grade constructed in 1882.	Eligible under Criteria A and C	Original fieldwork in 1998. Current fieldwork in 2003.
Site 24PA1185	The Rainbow Motel	Newly recorded site, 2003. Five wood-framed, one-story buildings, totaling 621 sq. meters (6,682 sq ft). All features except one were constructed in 1952.	Eligible under Criteria A and C	Current fieldwork in 2003.

DETERMINATION OF EFFECT

BR 11-1(44)56

Yellowstone River – NE of Livingston

Control No. 4790

Introduction

The Montana Department of Transportation (MDT) intends to replace a bridge and reconstruct the approaches on US Highway 89 at the northeast edge of Livingston in Park County, Montana. The project begins at Milepost 55.875 and proceeds northeasterly 1.014 miles to Milepost 56.889. The existing bridge and roadway approaches were constructed in 1934. Other than routine maintenance there have been no significant changes to this bridge and roadway since they were constructed. The existing roadway is 28-feet wide throughout the project area. Figure 1 shows the project area.

The Yellowstone River – NE of Livingston project would consist of the construction of a new bridge slightly downstream of the existing bridge's location. It is the intent of the project to construct a new bridge with new approaches. The approaches would be 35-feet wide and transition to 39-feet at the bridge. New Right-of-Way (R/W) would be required for this project.

Significant Cultural Resources

A cultural resource survey of the project area was conducted in 2003. The MDT and the Montana State Historic Preservation (SHPO) concurred in the National Register of Historic Places (NRHP) eligibility of one historic site within the project area: the Rainbow Motel (24PA1185). Also located within the Area of Potential Effect for this project is the NRHP-listed KPRK Radio Station (24PA988). The NRHP-eligible Yellowstone River Bridge (24PA1078) and the Northern Pacific Railroad Grade and Bridge (24PA1120) are also located within the APE for this project.

The Rainbow Motel consists of five buildings that were constructed in 1947 and about 1952.

✓ The site has functioned as a motel since its construction. It retains sufficient integrity and association with the post-World War II tourism boom and car culture to be eligible for the National Register under Criteria A and C.

✓ Listed on the National Register in 1979, the KPRK Radio Station was designed in 1946 and built in 1947. It is an exemplary example of a neo-Art Deco building and was recognized for that fact by its listing on the NRHP.

✓ The Yellowstone River Bridge was constructed in 1934 and is a fine example of a Great Depression-era steel girder bridge. The 5-span structure retains all of its original structural components and features and is eligible for the NRHP under Criteria A and C.

✓ The Northern Pacific Railroad Grade and Bridge is associated with the economic and social development of not only the Livingston area, but Montana. The grade and bridge, which is still active and now owned by Montana Rail Link, retains its significance to Montana history and is eligible for the NRHP under Criteria A and C.

Figure 1. Map showing the location of the MDT's Yellowstone River – NE of Livingston project.

Project Impact

A preliminary design of the Yellowstone River – NE of Livingston project has been completed and a copy of the plans in the vicinity of the historic sites is attached (Figures 2 & 3).

The existing centerline would be perpetuated at the Rainbow Motel (24PA1185). It is 98-feet from the historic property on top of a fill slope. The access to the site leads down the slope to the courtyard of the motel. The existing pavement edge is 84-feet from the site. Proposed widening of the roadway from the existing 28-feet to the proposed 35-feet would place the pavement edge at 80.5 feet from the site, or about 3.5 feet closer. The widening would consist mostly of paved shoulder. The fill slope would be reconstructed to accommodate the wider roadway. The toe of the slope would be 33± feet from the property, or about 30 feet closer. The proposed R/W line would be located close to the site, but fencing would not delineate the R/W.

At the KPRK Radio Station (24PA988), the proposed centerline would be shifted 13± feet to the north and away from the National Register-listed site to accommodate the new bridge alignment. The existing centerline is 144-feet from the property and the proposed centerline would be 157± feet from the property. The existing pavement edge is at the top of a fill slope 130-feet from the radio station. The proposed pavement edge would be located atop a fill slope at 139.5± feet from the site. The roadway, however, would be widened 7-feet or 3.5 feet in the direction of the historic property. The fill slope would be reconstructed with the toe of the slope being located 85-feet from the building. The proposed R/W boundaries would not extend to encompass the building. A fishing access site (FAS) would be developed to the east of the building opposite an existing access road. The alignment, width, and surfacing of the road would be perpetuated. The FAS would be landscaped to conform with the existing environment.

The existing Yellowstone River Bridge (24PA1078) would be removed as a result of the proposed project. Because of existing environmental conditions and the recommendations of the Governor-appointed Upper Yellowstone Task Force, the bridge would be removed and no effort made to preserve it in place.

It is the intent of the project to minimize any impact to the existing Northern Pacific Railway Grade and Bridge (24PA1120). Although the roadway would move closer to the grade for a distance of 918± feet on the west side of the existing bridge, it would not encroach on the railroad's R/W. The existing railroad alignment would be perpetuated and there would be no change to the existing railroad bridge.

Project Effect

There would be **No Adverse Effect** to the NRHP-eligible Rainbow Motel (24PA1185) as a result of the proposed project. Although the existing centerline would be perpetuated, the roadway would be widened 3.5 feet closer to the property necessitating the reconstruction of the existing fill slope. The toe of the fill slope would be located closer to the property, but it would not encroach onto any of the site's existing buildings and there would be no physical damage or modification made to them as a result of the project. The site's historic function would be perpetuated and it would not be abandoned, neglected or sold because of the project. All atmospheric impacts would be temporary in nature and mitigated by the existing state and federal

air quality regulations. There would be no significant change in the setting of the property as a two lane roadway would be perpetuated. Widening would consist primarily of a paved shoulder in the proximity of the site. The setting change would be in the reconstruction of the fill slope.

There would be **No Effect** to the NRHP-listed KPRK Radio Station. The centerline would be shifted 13± feet away from the property. Because the proposed centerline would be located farther away from the property, the proposed pavement edge would be located 9.5 feet further away from the site. The existing fill slope would be reconstructed, but it would not encroach significantly upon the property. There would be no encroachment of the site by construction activities and, consequently, no physical damage or alteration to the building caused by the project. It would continue with its existing appearance and historic function during and after construction. There would be no significant change in the setting of the property as a two-lane roadway would be perpetuated; widening would consist primarily of the addition of a paved shoulder on the proximal side of the roadway. None of the Criteria for Adverse Effect apply in this instance.

There would be an **Adverse Effect** to the Yellowstone River Bridge (24PA1078) as a result of the proposed project. The bridge would be removed and a new structure constructed to take its place. The bridge will be handled under the terms of the Historic Roads & Bridges Programmatic Agreement.

There would be **No Effect** to the National Register-eligible Northern Pacific Railway Grade & Bridge (24PA1120) as a result of the proposed MDT project. All construction activities would be located outside the existing railroad R/W on both sides of the Yellowstone River. There would be no encroachment of the railroad's R/W and the existing alignment and historic function would be perpetuated. The existing railroad bridge would not be replaced as part of this project and it would continue to maintain its historic function and appearance. The characteristics that make the site eligible for the National Register would not be diminished in any way and it would retain its status as a significant site to Montana history. The setting would also not be significantly impacted by the project.



2006060701

Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Jim Lynch, Director
Brian Schweitzer, Governor

June 6, 2006

Stan Wilmoth, Ph.D.
State Historic Preservation Office
1410 8th Avenue
P O Box 201202
Helena, MT 59620-1202

CONCUR
MONTANA SHPO

DATE 21 June 06 SIGNED [Signature]

RECEIVED

JUN 23 2006

ENTRANCE

MDT

Yellowstone River
NE of Livingston

Subject: BR 11-1(44)56
Yellowstone River -- NE of Livingston
Control No. 4790

Dear Stan:

Enclosed is the Determination of Effect for the above project in Park County. We have determined that the proposed bridge replacement project would have **No Adverse Effect** to the 988 Rainbow Motel (24PA1185), **No Effect** to the KPRK Radio Station (24PA1120) and Northern Pacific Railway Grade & Bridge (24PA1120) and an **Adverse Effect** to the Yellowstone River Bridge (24PA1078) for the reasons specified in the document. The Adverse Effect to the bridge will be handled under the terms of the Historic Roads & Bridges Programmatic Agreement. We request your concurrence.

If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

Enclosure

cc: Jeff Ebert, P.E., Butte District Administrator
Kent Barnes, P.E., Bridge Engineer
Bonnie Steg, Resources Section



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

JUN 18 2003

ENVIRONMENTAL

CONCUR
MONTANA SHPO

May 28, 2003

DATE 6/10/03 SIGNED

Mark Baumler, Ph.D.
State Historic Preservation Office
1410 8th Avenue
P O Box 201202
Helena, MT 59620-1202

Subject: BR 11-1(44)56
Yellowstone River - NE of Livingston
Control No. 4790

Enclosed is the cultural resource report, CRABS, and site forms for the above project in Park County. Ethnoscience noted the presence of three previously recorded sites within the Area of Potential Effect for this project. THE KPRK Radio Station (24PA988) was listed in the National Register of Historic Places in 1979. The Yellowstone River Bridge (24PA1078) and the Northern Pacific Railroad Grade and Bridge (24PA1120) were previously determined eligible for the NRHP. Ethnoscience recorded only one new site, the Rainbow Motel (24PA1185). Although it recommends the site ineligible for the NRHP, we disagree with Ethnoscience's recommendation and have determined the site eligible for the NRHP under Criteria A and C.

If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

Enclosures

cc: Jeff Ebert, P.E., Butte District Administrator
Joe Kolman, P.E., Bridge Engineer
Gordon Stockstad, Resources Section

file: MDT/2003



MONTANA HISTORICAL SOCIETY

225 North Roberts ♦ P.O. Box 201201 ♦ Helena, MT 59620-1201
♦ (406) 444-2694 ♦ FAX (406) 444-2696 ♦ www.montanahistoricalsociety.org ♦

*Agency Coordination
- Coop Agencies*

*(sent to
Ethnoscience
4/8/03)*

REC'D APR 4 2003

FILE COPY

April 1, 2003

Laura Hunter
David Evans And Associates, Inc.
1331 17th Street, Suite 900
Denver, CO 80202

RE: YELLOWSTONE RIVER – NE LIVINGSTON BRIDGE REPLACEMENT. SHPO
Project #: 2003033109

Dear Laura:

I have conducted a cultural resource file search for the above-cited project located in Section 7, T2S, R10E. According to our records there have been a few previously recorded sites within the designated search locale. Site 24PA1078 is the same bridge that your project is going to replace. In addition to the sites there have been a few previously conducted cultural resource inventories done in the area. I have enclosed a list of these sites and reports. If you would like any further information regarding the sites or reports you may contact me at the number listed below.

Because this project is being managed by the Montana Department of Transportation we feel that their cultural resource people should be contacted for their guidance and any cultural resource concerns that they might have. Thank you for consulting with us.

If you have any further questions or comments you may contact me at (406) 444-7767 or by e-mail at dmurdo@state.mt.us.

Sincerely,

Damon Murdo
Cultural Records Manager

Cc: Jon Axline – MDT

File: MDOT/2003





STATE HISTORIC PRESERVATION OFFICE

Cultural Resource Information Systems

CRIS Section Report

April 01, 2003

Site #	Form	Twp	Rng	Sec	Qs	Site Type1	Site Type 2	Time Period	Owner	NR Stat
24PA0702		2 S	10E	7	NW	Historic Agriculture	Historic Irrigation System	1930-1939	State Owned	CD
24PA0702		2 S	10E	7	NW	Historic Irrigation System	Null	1930-1939	Private	CD
24PA0988		2 S	10E	7	Oth	Historic Communication	Null	1940-1949	Combination	NR List
24PA1078		2 S	10E	7	SE	Historic Vehicular/Foot Bridge	Null	Historic More Than One Decade	MDOT Other	Undetermi
24PA0987		2 S	10E	7	SW	Historic Residence	Null	1910-1919	Combination	NR List



State Historic Preservation Office

Cultural Resource Annotated Bibliography System

CRABS Section Report

April 01, 2003

Township: 02S Range: 10E Section: 7

HERITAGE

RESEARCH ASSOCIATES, INC.

4/28/1981

CULTURAL RESOURCE INVENTORY, MAIN-CHINOOK-C-GALLATIN STREETS,
LIVINGSTON, PARK COUNTY, MONTANA; PROJECT M7406(1)

CRABS Document Number: PA 4 6472 Agency Document No: M7406(1)

Township: 02S Range: 10E Section: 7

LAHREN

LARRY A.

3/9/1981

GREEN ACRES PARK

CRABS Document Number: PA 6 6508 Agency Document No:

Township: 02S Range: 10E Section: 7

BROWNELL

JOAN L., ET AL.

6/ /1990

HISTORIC PROPERTIES CULTURAL RESOURCE INVENTORY FOR THREE
CANDIDATE GWEN SITES IN PARK COUNTY, MONTANA

CRABS Document Number: PA 6 11636 Agency Document No:

Township: 02S Range: 10E Section: 7

WOOD

GARVEY C.

6/2/1993

EMPIRE SAND AND GRAVEL - WATSON GRAVEL SOURCE (BOZEMAN HILL EAST
AND WEST)

CRABS Document Number: PA 4 15054 Agency Document No: IM 90-6(63)318

Township: 02S Range: 10E Section: 7

GREISER

T. WEBER, ET AL.

11/1/2000

RESULTS OF A CULTURAL RESOURCES INVENTORY FOR THE TOUCH
AMERICA/AT & T FIBER OPTIC CABLE ROUTE BETWEEN BILLINGS AND
LOOKOUT PASS IN MONTANA

CRABS Document Number: ZZ 1 23275 Agency Document No:

Appendix D Noise

**Bionomics
Environmental, Inc.**

Memo

To: Laura Hunter
From: David Aspitarte
Date: 05/08/03
Re: Livingston Noise Technical Memorandum

Traffic Noise Levels for Existing and No-build Design Year 2026

Yellowstone R-NE of Livingston
Project Number BR 11-1(44)56
Control Number 4790

PROJECT DESCRIPTION

The Montana Department of Transportation (MDT), in association with the Federal Highway Administration (FHWA), proposes to conduct an environmental analysis and to replace the functionally obsolete bridge and corresponding road approaches across the Yellowstone River on P11 at reference post (RP) 55.94 (Figure 1).

David Evans and Associates, Inc. will manage the environmental compliance documentation and Bionomics Environmental, Inc. will complete the noise analysis. The Montana Department of Transportation will perform the project design and administration.

This preliminary noise analysis study is in compliance with the U.S. Code of Federal Regulations Part 772 (23CFR 772) (*Procedures for Abatement of Highway Traffic Noise and Construction Noise*) and the Montana Department of Transportation policy (*Traffic Noise Analysis and Abatement: Policy and Procedure Manual, June 2001*). A Draft Noise Study Technical Report based on the design alternatives will be submitted when those plans become available.

SENSITIVE RECEPTORS

Several sensitive receptors were observed in the field on the southwest approach to the Yellowstone Bridge. These include The Rainbow Motel, the KRPK radio station to the northeast and an antique store to the southwest. There is also a mobile home park located directly behind the motel. Please see Figure 1 for receptor locations.

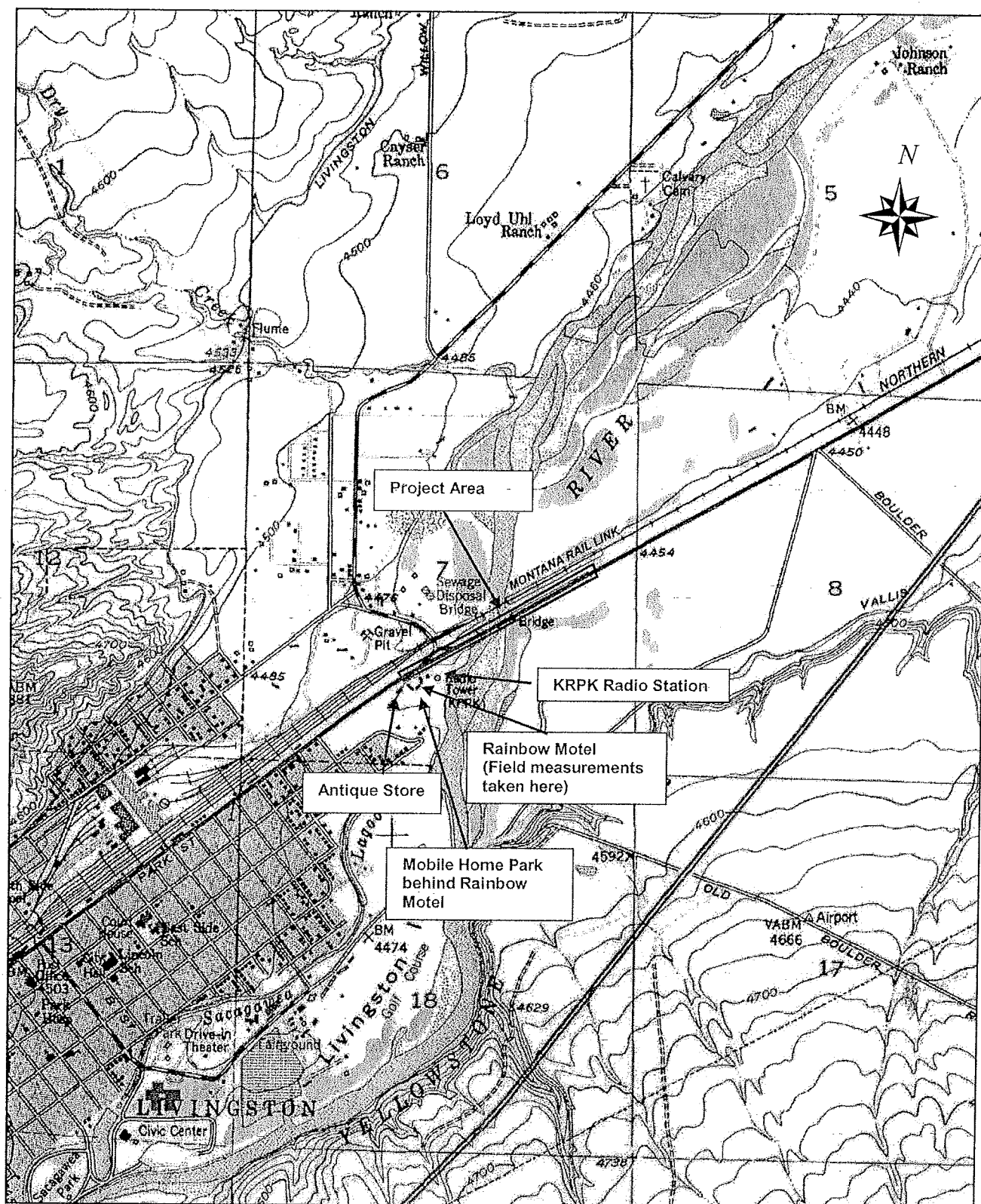


Figure 1. Location and topography of Yellowstone River NE of Livingston, Route 11/US 89, project area depicting sensitive receptor site, Park County, Montana.

T2S, R10E, Section 7

Source: USGS 7.5' Quadrangle Livingston, Montana

Approximate Scale: 1 inch = 2,000 feet

FIELD RESULTS

The field-testing for this noise study was performed in front of the Rainbow Motel on the Southwest (Livingston) side of the bridge during morning and evening rush-hour traffic with the representative sampling performed at high traffic flows. This receptor was the closest to centerline of three receptors in a row (the other two are the radio station and antique store). These include measurements taken during times of high traffic volumes, commercial truck traffic, or peak periods of human activity and are not necessarily at rush hour. The measurements are not taken at each sensitive receptor and are only used to verify the computer model accuracy. A concerted effort is made to take noise measurements at each of the most sensitive areas, and field measurements can vary from the computer modeling results based on factors such as community noise and atmospheric conditions. The ambient noise levels were taken using a CEL-573.C1 precision impulse integrating sound level meter S1.4 Type 1. The meter was calibrated using a CEL 284/2 calibrator before use, with meteorological data taken before and after the field measurements.

Ambient levels in the vicinity of a sensitive receptor were taken during a 1-day period on 4/15/03 for the Livingston Bridge project. The resulting ambient levels are listed below in Table 1.

Table 1. Exterior field measurement of noise at the Rainbow Motel

Receptor	Address	Date	Location	Time	LeqA Field
1.	Rainbow Motel	4/15/03	Southwest of Bridge	7:00 am	63.0
2.	Rainbow Motel	4/15/03	Southwest of Bridge	7:45 am	63.4
3.	Rainbow Motel	4/15/03	Southwest of Bridge	4:30 pm	64.0

Railroad noise was observed until about 11:30 p.m. as there is a Montana Rail Link yard in Livingston and the tracks run parallel to the road. By law, locomotive engineers are required to sound the horn on the locomotive five times upon approach to a crossing. No noise measurements were taken with train activity present.

Table 2 shows preliminary results from the Traffic Noise Model 2.1 (TNM 2.1) in the letting year of 2006 and in the projected design year of 2026. Final noise calculations for the Design Alternatives will be conducted after the plan and section drawings are made available.

Table 2. No Build Alternative/State Primary Route 11/US 89, current and projected L_{eqA} noise levels (dBA) at a posted speed of 45 mph.

No.	Owner	2006 US 89 45 mph	2026 US 89 45 mph
1.	Rainbow Motel	57.8	58.6

Traffic volumes for 2002 are 285 vehicles DHV and 2006 volumes are 353 vehicles DHV for State Primary Route 11/US 89 in the project area with 10 percent trucks. The DHV for the design year of 2026 is 430 vehicles with 10 percent trucks. Doubling the traffic volume would theoretically increase the sound level by three decibels; increasing the traffic volume on State

Primary Route 11/US 89 from 353 DHV to 430 DHV would increase the actual noise level by approximately .5 decibels (Table 3).

Table 3. Volume and percentage of vehicles by type on State Primary Route 11/US 89. Shown as Average Daily Traffic (ADT) and Design Hourly Volumes (DHV).

RP 55.94			
	2002 ADT	2006 ADT	2026 ADT
Cars	2331 (90.0%)	2421 (90.0%)	2952 (90%)
Medium Trucks	130 (5%)	135 (5%)	164 (5%)
Heavy Trucks	129 (5%)	134 (5%)	164 (5%)
	2002 DHV	2006 DHV	2026 DHV
Cars	257 (90%)	318 (90%)	387 (90%)
Medium Trucks	14 (5%)	18 (5%)	22 (5%)
Heavy Trucks	14 (5%)	17 (5%)	21 (5%)

Table four shows the calibration of the TNM 2.1 Noise Model using observed traffic volume. Coordinates for the road are the observed distance to centerline with the road running parallel to the receptor.

Table 4. Calibration of the TNM 2.1 Noise Model/State Primary Route 11/US89, L_{eqA} noise levels (dBA) using observed traffic volumes.

No.	Owner	Measured Noise Levels	TNM Calculated Noise Levels
1.	Rainbow Motel 184 vehicles/hour	63.0	52.7
2.	Rainbow Motel 412 vehicles/hour	63.4	57.5
3.	Rainbow Motel 400 vehicles/hour	64.0	56.0

The TNM model results did not compare favorably to the ambient noise levels due to the rural nature of the project and other noise sources that are associated with activities at the motel, mobile home park and antique store. Due to the close proximity to the Yellowstone River, all measurements had a high component of wildlife noise associated with birds. The model results averaged 87% of the ambient levels. No adjustments were made to any calculated levels as this is a preliminary report.

This technical memorandum is in response to a deliverable outlining the existing noise impacts on the Livingston project and the noise impacts for the no-build alternative in the design year of 2026. Traffic increases only account for an average of 0.5 dBA rise for the receptors along the project corridor. No receptors meet or exceed the FHWA noise criteria standards for residences or motels of 67 dBA nor do they approach at 66 dBA according to Montana Department of Transportation guidelines.

Appendix E Programmatic 4(f) Evaluation

MONTANA DIVISION

"NATIONWIDE" PROGRAMMATIC SECTION 4(f) EVALUATION FOR
HISTORIC BRIDGES

Project # BR 11-1 (44)56 (PPMS-OPX2 C4790)

Date: January 8, 2008

Project Name: Yellowstone River NE of Livingston EA

Location: Park County

On State Primary Route 11/

US 89 Mile Post (MP) 55.94

This proposed project requires use of a historic bridge structure that is on, or eligible for listing on the NATIONAL REGISTER OF HISTORIC PLACES. A description and location map of this proposed bridge replacement project is attached.

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement. Consult the "Nationwide" Section 4(f) Evaluation procedures.

	<u>YES</u>	<u>NO</u>
1. Is the bridge a NATIONAL HISTORIC LANDMARK?	<input type="checkbox"/>	<u>X</u>
2. Have agreements been reached through the procedures pursuant to <i>Section 106</i> of the <i>National Historic Preservation Act</i> with the following:		
STATE HISTORIC PRESERVATION OFFICE (SHPO)?	<u>X</u>	<input type="checkbox"/>
ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP)?	<u>X</u>	<input type="checkbox"/>
3. Any other agency/ies with jurisdiction at this location?	<u>X</u>	—
a) If "YES" will additional approval(s) for this <i>Section 4(f)</i> application be required?	<input type="checkbox"/>	<u>X</u>
b) List of agencies with jurisdiction at this location:		
USA - CORPS OF ENGINEERS (<i>Section 404</i> Permit)	<u>X</u>	—
USDA - Forest Service	<input type="checkbox"/>	<u>X</u>
USDA - Soil Conservation Service (<i>CPA-106 form completed as per FPPA</i>)	<input checked="" type="checkbox"/>	—
FEMA Regulatory Floodway (Floodplain Development Permit will be completed)	<input checked="" type="checkbox"/>	—
MDFW&P - Parks Division (Fishing Access Site)	<input type="checkbox"/>	<u>X</u>
MDFW&P - Wildlife Division (wetlands)	<input type="checkbox"/>	<u>X</u>
MDFW&P - Fisheries Division (<i>SPA 124 will be completed</i>)	<input checked="" type="checkbox"/>	—
DNRC (<i>Section 10 Permit will be completed for navigable rivers under state law</i>)	<input checked="" type="checkbox"/>	—
MDEQ - Air And Waste Management Bureau	—	<u>X</u>
MDEQ - Water Quality Bureau (<i>318 Authorization will be completed</i>)	<u>X</u>	—
MDNR&C (irrigation systems)	—	<u>X</u>
Other: _____	—	<u>X</u>

ALTERNATIVES & FINDINGS

EACH of the following **ALTERNATIVES** for this proposed project have been evaluated to avoid the use of the historic bridge:

1. "Do Nothing."
2. Rehabilitate the existing bridge without affecting the historic integrity of the structure in accordance with the provisions of *Section 106* in the *NHPA*.
3. Construct the proposed bridge at a location where the existing historic structure's integrity will not be affected as determined by the provisions of the *NHPA*.

The above **ALTERNATIVES** have been applied in accordance with this PROGRAMMATIC SECTION 4(f) EVALUATION and are supported by **EACH** of the following **FINDINGS**:

	<u>YES</u>	<u>NO</u>
1. The "Do Nothing" ALTERNATIVE has been evaluated and has been found to ignore the basic transportation need at this location.	<u>X</u>	<input type="checkbox"/>
This ALTERNATIVE is neither feasible nor prudent for the following reasons:		
a) Maintenance — this ALTERNATIVE does not correct the structurally deficient condition and/or poor geometrics (clearances, approaches, visibility restrictions) found at the existing bridge. Any of these factors can lead to a sudden catastrophic collapse, and/or a potential injury including loss of life. Normal maintenance will not change this situation.	<u>X</u>	<input type="checkbox"/>
[The bridge has a structural sufficiency rating of 57.6 and therefore is not considered structurally deficient. However, it is considered functionally obsolete because it is too narrow to meet MDT standards.]		
b) Safety — this ALTERNATIVE also does not correct the situation which causes the existing bridge to be considered deficient. Because of these deficiencies, the existing bridge presents serious and unacceptable safety hazards to the travelling public and/or places intolerable restrictions (gross vehicle weight, height, and/or width) on transport.	<u>X</u>	<input type="checkbox"/>
[Bridge is 6.7-m [22-ft] wide from curb to curb. Applicable MDT standards state that structures that are functionally obsolete and have a sufficiency rating between 50 and 80 are eligible for rehabilitation unless otherwise approved by FHWA.]		
A copy of the MDT Bridge Bureau's Inspection Report is attached.	<u>X</u>	<input type="checkbox"/>

ALTERNATIVES & FINDINGS (continued)

	<u>YES</u>	<u>NO</u>
2. The rehabilitation ALTERNATIVE has been evaluated with one or more of the following FINDINGS :		
a) The existing bridge's structural deficiency is such that it cannot be rehabilitated to meet minimum acceptable load and traffic requirements without adversely affecting the structure's historic integrity. [The existing bridge is structurally sufficient.]	<u>NA</u>	_____
b) The existing bridge's geometrics (height, width) cannot be changed without adversely affecting the structure's historic integrity. [Moving the bridge would require dismantling it and destroying the reinforced concrete guardrails. These type of guardrails were standard to bridges built by the MDT in the 1930's and their loss would make the struture ineligible for the NRHP.]	<u>X</u>	_____
Is this rehabilitation ALTERNATIVE therefore considered to be feasible and/or prudent based on the preceding evaluations?	<input type="checkbox"/>	<u>X</u>
3. The relocation ALTERNATIVE , in which the new bridge has been moved to a site that presents no adverse effect upon the existing structure has also been considered under the following FINDINGS :		
a) Terrain and/or local geology. The present structure is located at the only feasible and/or prudent site for a bridge on the existing route. Relocating to a new site either up-, or downstream of the preferred Location will result in extraordinary bridge/approach engineering and associated construction costs. The preferred site is the <u>only</u> prudent location due to the terrain and/or geologic conditions in the general vicinity. Any other location would cause extraordinary disruption to existing traffic patterns.	<u>X</u> <u>X</u> <u>X</u>	_____ _____ _____
b) Significant social, economic and/or environmental impacts. Locating the proposed bridge in other than the preferred site would result in significant social/economic impacts such as the displacement of families, businesses, or severing of prime/unique farmlands. Significant environmental impacts such as the extraordinary involvement in wetlands, regulated floodplains, or habitat of threatened/endangered species are likely to occur in any location outside the preferred site.	<u>X</u> <u>X</u>	_____ _____
c) Engineering and economics. Where difficulty/ies associated with a new location are less extreme than those listed above, the site may still not be feasible and prudent where costs and/or engineering difficulties reach extraordinary magnitudes. Does the ALTERNATE location result in significantly increased engineering or construction costs (such as a longer span, longer approaches, etc.)?	<u>X</u>	_____

ALTERNATIVES & FINDINGS (continued)

YES

NO

- d) Preservation of the existing historic bridge may not be possible due to either or both of the following:

the existing structure has deteriorated beyond all reasonable possibility of rehabilitation for a transportation or alternative use;

NA

—

[This bridge is considered functionally obsolete because it is too narrow to meet MDT standards. It is also fracture critical due to the 2-girder system. MDT does not rehabilitate fracture critical structures.]

no responsible party can be located to maintain and preserve the historic structure.

NA

—

[Because of the sheer size of the bridge, the weight both with and without the concrete deck, its location, and the way the bridge was originally built, it is not a good candidate for the MDT Adopt-A-Bridge Program. It can not remain in place and it is not suitable for relocation. The Historic roads and Bridges Programmatic Agreement [Section 3(E)(3)] has a provision in it to not put NRHP-eligible bridges up for adoption if they cannot be feasibly moved.]

Therefore, in accordance with the previously-listed FINDINGS it is neither feasible nor prudent to locate the proposed bridge at a site other than the preferred **ALTERNATE** as described.

X

☐

MEASURES TO MINIMIZE HARM

This "Nationwide" Programmatic *Section 4(f)* Statement applies only when the following **Measures to Minimize Harm** have been assured; a check in a box MAY void the Programmatic application — if so, a full *Section 4(f)* Evaluation **will be required**:

	<u>YES</u>	<u>NO</u>
1. Is the bridge being rehabilitated under this proposed project?	___	<u>X</u>
If "YES", is the historic integrity of the structure being preserved to the greatest extent possible; consistent with unavoidable transportation needs, safety, and load requirements?	<u>N/A</u>	<input type="checkbox"/>
<u>NOTE:</u> If "NO", refer to item 2., following, to determine <u>Programmatic</u> applicability.		
2. The bridge is being replaced, or rehabilitated to the point where historic integrity is affected. Are adequate records being made of the existing structure under HISTORIC AMERICAN ENGINEERING RECORD standards, or other suitable means developed through consultation with SHPO and the ACHP?	<u>X</u>	<input type="checkbox"/>
3. If the bridge is being replaced, is the existing structure being made available for alternative use with a responsible party to maintain and preserve same?	___	<input checked="" type="checkbox"/>
[Because of the sheer size of the bridge, the weight both with and without the concrete deck, its location, and the way the bridge was originally built, it is not a good candidate for the MDT Adopt-A-Bridge Program. It can not remain in place and it is not suitable for relocation. The Historic roads and Bridges Programmatic Agreement [Section 3(E)(3)] has a provision in it to not put NRHP-eligible bridges up for adoption if they cannot be feasibly moved.]		
4. If the bridge is being adversely affected, has agreement been reached through the <i>Section 106</i> process of the <i>National Historic Preservation Act</i> on these Measures to Minimize Harm (which will be incorporated into the proposed project) with the following:		
SHPO - (Date: <u>5/11/1989</u> amended <u>2/27/92</u>)	<u>X</u>	<input type="checkbox"/>
ACHP - (Date: <u>6/1/1989</u> amended <u>3/16/92</u>)	<u>X</u>	<input type="checkbox"/>
FHWA - (Date: <u>5/11/1989</u> amended <u>2/27/92</u>)	<u>X</u>	<input type="checkbox"/>
A copy of the Programmatic Memorandum of Agreement (P.M.O.A.) signed/approved by these agencies is attached.	<u>X</u>	<input type="checkbox"/>

COORDINATION

There has been additional **COORDINATION** with the following agencies regarding this proposed project (other than those listed previously):


Local historical society: SHPO – June 6, 2006 letter attached with SHPO concurrence of June 21, 2006. MDT will contact the Yellowstone Gateway Museum.

Adjacent property owners: MDT will contact Montana Rail Link and other adjacent property owners (to be determined by MDT).

Others:

Copies of letters from these agencies regarding this proposed project are attached. This proposed project is also documented as a Environmental Assessment under the requirements of the *National Environmental Policy Act* (**42 U.S.C. 4321, et seq.**).

SUMMARY & APPROVAL - The proposed action meets all criteria regarding the required **ALTERNATIVES**, **FINDINGS**, and **Measures to Minimize Harm** which will be incorporated into this proposed project. This proposed project therefore complies with the July 5, 1983 Programmatic Section 4(f) Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration. This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.



Tom S. Martin P.E.
Bureau Chief,
Environmental Services

Date: 1/15/08

Approved: Jeffrey Platten
Federal Highway Administration

Date: 1/16/08

MDT attempts to provide accommodation for any known disability that may interfere with a person participating in any service, program or activity of the Dept. Alternative accessible formats of this information will be provided upon request. For further information, call 406-444-7228 or TTY (800-335-7592), or call Montana Relay at 711.

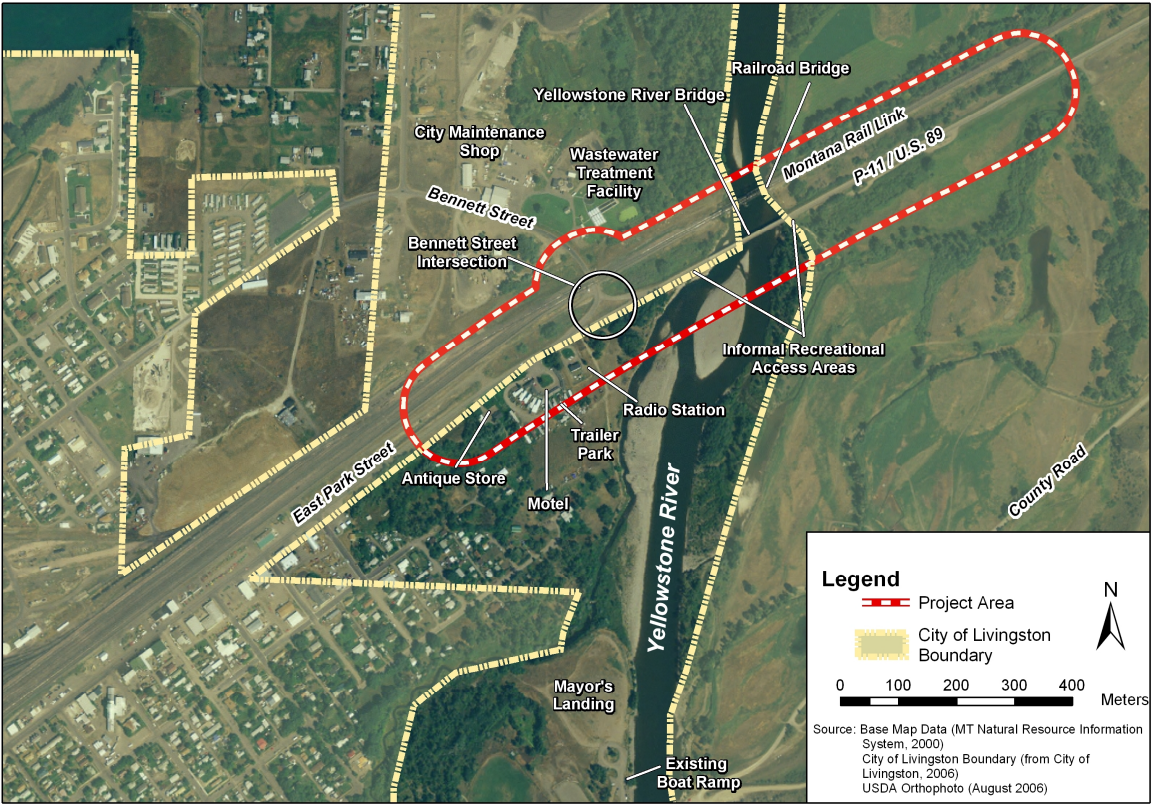
Project Description:

The Yellowstone River Bridge NE of Livingston is a five-span steel girder and floor beam structure, 152-m (500-ft) long, resting on reinforced concrete abutments and four piers. It was built without use of a crane. The Yellowstone River Bridge is eligible for listing on the National Register of Historic Places (NRHP), but is not included in MDT's Roads and Historic Bridges Historic Preservation Plan. Although the bridge is not structurally deficient, it is functionally obsolete because it is too narrow and does not meet MDT standards. The proposed project would remove the existing bridge and replace it with a wider structure in the same location.

Figure 1 Project Location Map



Figure 2 Proposed Project Area



**PROGRAMMATIC AGREEMENT
AMONG
THE FEDERAL HIGHWAY ADMINISTRATION,
THE MONTANA DEPARTMENT OF TRANSPORTATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
AND
THE MONTANA STATE HISTORIC PRESERVATION OFFICE
REGARDING HISTORIC ROADS AND BRIDGES
AFFECTED BY MONTANA DEPARTMENT OF TRANSPORTATION
UNDERTAKINGS IN MONTANA**

WHEREAS, the Federal Highway Administration, Montana Division (FHWA), proposes to make Federal funding available to the Montana Department of Transportation (MDT) for that agency's on-going program to construct or rehabilitate highways and bridges; and

WHEREAS, the FHWA has determined that this federally-assisted program may have an effect upon a certain class of properties included in or eligible for inclusion in the National Register of Historic Places (NRHP) and has consulted with the Advisory Council on Historic Preservation (Council) and the Montana State Historic Preservation Office (SHPO) pursuant to Section 800.14 of the regulations (36 CFR 800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the FHWA and the MDT developed an Historic Preservation Plan (HPP) regarding historic roads and bridges in 1997 and that document was subject to review under 36 CFR 800.14 and was adopted by FHWA, SHPO, and the Council and implemented through Programmatic Agreements in 1997 and 2001 with amendments in 1999 and 2003, respectively; and

WHEREAS, the FHWA and MDT in consultation with SHPO has re-evaluated the 1997 HPP and the 1997 and 2001 Programmatic Agreements and their amendments to determine what products and actions have been completed, have been effective, or should be dispensed, revised or restated in a new Programmatic Agreement; and

WHEREAS, this Programmatic Agreement (Agreement) shall supercede all of the previous Programmatic Agreements and their amendments regarding undertakings affecting historic roads and bridges in Montana; and

WHEREAS, the MDT participated in the consultation and has been invited to concur in this Agreement; and

WHEREAS, all references to 36 CFR 800 within this Agreement are to the Council's revised regulations, effective August 5, 2004;

NOW THEREFORE, the FHWA, the MDT, the Council, and the Montana SHPO agree that the Montana historic roads and bridges program addressed in this Agreement shall be

administered in accordance with the following stipulations to satisfy the FHWA's Section 106 responsibility for all individual undertakings of the program.

Stipulations

The FHWA will ensure that the following measures are carried out:

1. MONTANA DEPARTMENT OF TRANSPORTATION AND MONTANA STATE HISTORIC PRESERVATION OFFICE COOPERATION

- A. MDT and SHPO will strive to work cooperatively in all matters concerning the identification, evaluation and treatment of historic roads and bridges.
- B. MDT will routinely encourage, invite, and support SHPO participation in on-site field visits and meetings for MDT undertakings involving historic roads and bridges.
- C. SHPO will routinely provide constructive reviews and comments to all written requests for consultation from MDT and will routinely communicate, advise and meet with MDT to share information and seek to resolve issues pertaining to historic roads and bridges before they arise.

2. FOR UNDERTAKINGS INVOLVING HISTORIC ROADS

- A) This Agreement will apply to all historic roads constructed in Montana after 1859.

B) Montana Historic Highway Program

For those roads built after 1859 under the jurisdiction of the MDT, the following program will be established:

- 1) The MDT Environmental Services Bureau in consultation with SHPO will compile a list of a minimum of 12 (twelve) historic road segments in Montana that are especially significant for their historic associations and/or engineering and associated features (i.e. bridges, roadside architecture, proximity to abandoned segments of historic road, etc.) for inclusion in a Montana Historic Highway Program.
 - a) The MDT Environmental Services Bureau historian, in consultation with SHPO, will identify proposed segments in a draft list for inclusion in this program by June 30, 2007.
 - b) A segment is defined as a recognizable section of roadway that retains a significant portion of its original design features, alignment and associated features (i.e. roadside architecture,

bridges, etc.) to meet the criteria for inclusion in the National Register of Historic Places.

- c) The draft list will be distributed to the FHWA, MDT Highways and Planning Division Administrators, MDT District Administrators, and the MDT Highways Bureau for comment.
 - d) A final list with map (to be included as **Attachment 1** to this Agreement) will be mutually approved by MDT and SHPO by December 31, 2007 for inclusion in the Montana Historic Highway Program to be implemented by this Agreement.
- 2) If not already inventoried and evaluated and prior to any undertaking with the potential to impact the road segments identified above, the MDT will record each identified historic road segment in the Montana Historic Highway Program as a minimally defined linear site and assign it Smithsonian trinomial number. The MDT will evaluate the historic significance and integrity of the road in consultation with SHPO, pursuant to 36 CFR 800.4.
 - 3) For the historic road segments in the Montana Historic Highway Program, MDT will seek whenever prudent and feasible to preserve or incorporate into the design of all proposed undertakings as many of the historic features associated with the designated roadway as is possible based on current American Association of State Highway and Transportation Officials (AASHTO) standards. Specifically, MDT will incorporate preservation and context sensitive design early in the planning process, including (but not limited to):
 - a) MDT will consider the historic road and features associated with it under the guidelines delineated in *Saving Historic Roads: Design & Policy Guidelines* (National Trust for Historic Preservation, 1998).
 - b) MDT will ensure that when a segment of designated historic roadway is programmed for widening or reconstruction, the MDT Preconstruction Bureau will notify the MDT Environmental Services Bureau prior to the Preliminary Field Review for early consideration for preservation of historic values.
 - c) MDT will use design exceptions as necessary and allowable to minimize impacts to historic highway features that may be located within the right-of-way (R/W) or clear zone.
 - d) MDT will integrate existing historic road features into changes in the proposed roadway. If necessary and feasible to move features, they will be relocated to correspond to their original context (i.e. concrete R/W markers and retaining walls).
 - e) MDT will coordinate historic preservation with MDT's mandate to provide safe and efficient roadways for the traveling public.
 - 4) For all undertakings involving roads in the Montana Historic Highway Program, MDT will explicitly identify the roads as part of the Montana

- 5) For all undertakings involving roads in the Montana Historic Highway Program, MDT will explicitly identify the roads as part of the Montana Historic Highway Program, submit documentation including description, public comment and assessment of effect; and invite SHPO to comment pursuant to 36CFR800.5 upon the potential for impact to historic values. SHPO will have 30 days to respond.
 - 6) If MDT, in consultation with SHPO, determines that a road in the Montana Historic Highway Program will be adversely affected pursuant to the criteria as defined in 36 CFR 800.5(a), FHWA and MDT will consult with the Council, SHPO and any other consulting parties to resolve the adverse effect pursuant to 36 CFR 800.6-7, including development of a Memorandum of Agreement (MOA), as necessary.
- C) For undertakings involving all other historic roads *not* included as part of the Montana Historic Highway Program, the following procedures will apply:
- 1) The MDT and FHWA will comply with 36 CFR 800.3-6 for consideration and consultation on historic properties in the Area of Potential Effect (APE) other than historic roads.
 - 2) For the historic roads, MDT will identify, record, and assign Smithsonian trinomial site numbers to historic-age (> 50 years old) roads or road segments located within the Area of Potential Effect (APE) of MDT's undertakings.
 - 3) MDT in consultation with SHPO will seek to avoid impacts to all intact historic features associated with the historic-age roads.
 - 4) If MDT and SHPO determine that a particular road contains historically significant features that are eligible for listing in the National Register of Historic Places on a *statewide* or *national* level, MDT will consult with SHPO to develop and implement a plan to avoid or incorporate the features into the agency's undertaking in a manner that preserves their historical significance and integrity.

3. FOR UNDERTAKINGS INVOLVING HISTORIC BRIDGES

- A) MDT will comply with 36 CFR 800.4 with regard to identifying and evaluating, in consultation with SHPO, the National Register eligibility of historic-age (>50 years old) bridges.
 - 1. MDT will identify, record, and obtain Smithsonian trinomial site numbers from the state Site Records Office, The University of Montana, for all bridges to be evaluated for eligibility to the NRHP.
 - 2. MDT will consider national, state, and local levels of significance in determining the eligibility of bridges to the NRHP.

- B) For NRHP-eligible bridges that may be impacted by MDT undertakings, including proposed bridge replacement, FHWA and MDT will consider preservation in place and historic bridge rehabilitation alternatives early and thoroughly in the planning and public comment process.
 - 1. Where applicable, FHWA and MDT will encourage use of Community Transportation Enhancement Program (CTEP) and Treasure State Endowment Program (TSEP) funds for the preservation and rehabilitation of NRHP-eligible bridges rather than bridge demolition or removal.

- C) For all NRHP-eligible bridges that MDT concludes, after planning and public comment, that the bridge will be affected by an undertaking, (including those considered for the Montana Adopt-A-Bridge Program or the Montana Historic Bridge Rehabilitation Program [see below Stipulation 3E and 3F]), MDT will implement the following actions:
 - 1. MDT will notify SHPO and any other consulting parties and invite their comment on the undertaking. SHPO and other consulting parties shall have at least 30 days to comment. MDT will take into consideration the comments of SHPO and other consulting parties in implementing the undertaking
 - 2. MDT will consult with the National Park Service's Historic American Engineering Record (HAER) to determine the level of documentation necessary and appropriate for recording the bridge.
 - A. If accepted by HAER for official record-keeping, MDT will submit original documentation to HAER and copies to the SHPO, The University of Montana Site Records Office (as a site update), the Montana State University-Bozeman, interested local historical societies and/or museums, and new owners, as applicable (i.e., Montana Adopt-A-Bridge Program).
 - B. If not accepted by HAER for official record-keeping, MDT will submit original documentation to SHPO and copies to The University of Montana Site Records Office (as a site update),

interested local historical societies and/or museums, and new owners, as applicable (i.e., Montana Adopt-A-Bridge Program).

3. As allowable and appropriate, MDT will salvage historic components (i.e. trusses, masonry abutment walls, guardrails, etc.) for reuse on new bridges and/or include structural features in the design of new bridges that closely approximate historic structural components and design.

D) For all bridges determined to be not NRHP eligible that will be affected by a MDT undertaking, MDT will update the historic property record (site form) to reflect the impact of the undertaking.

1. Updated information, including before and after photographs, will be submitted to The University of Montana Site Records Office as a site update.

E) *Montana Adopt-A-Bridge Program*

1. MDT will initiate and promote a Montana Adopt-A-Bridge program to find new locations, uses and/or owners for certain historic bridges that are NRHP eligible and have been designated for replacement or demolition because rehabilitation and preservation in-place is not feasible.
2. The Montana Adopt-A-Bridge program will encompass all historic truss and steel girder bridges with a structural rating of three (3) or above. At its discretion, MDT may also consider other bridges for adoption.
3. A determination of suitability of an historic truss or steel girder bridge for inclusion in the Montana Adopt-A-Bridge program will be made during the preliminary field review of the proposed project by the appropriate District Administrator, in consultation with the MDT Bridge Bureau and the MDT's Environmental Services Bureau historian.
 - a. The MDT Bridge Bureau's recommendation will be based on the structural condition of the bridge and its suitability for relocation.
 - b. The MDT Environmental Services Bureau historian's recommendation will be based on the bridge's historic and/or structural significance.
 - c. MDT will notify SHPO of the bridge's selection or non-selection for the Montana Adopt-A-Bridge Program and given fifteen (15) calendar days to comment.
4. MDT will prepare and distribute a brochure that provides information about the Montana Adopt-A-Bridge program to the general public.
 - a. The brochure will be available through the MDT headquarters and each of the five district offices. Copies of the brochure will also be provided to the 56 Montana counties. It will also be distributed at public hearings where bridges deemed eligible for the program are discussed.

- b. The brochure will include specific guidance on the issue of legal liability and insurance.
- 5. If deemed suitable for the Montana Adopt-A-Bridge Program, the bridge will be advertised for adoption in the local newspapers, radio public service announcements (PSAs), and on the MDT's Internet website.
 - a. The MDT Environmental Services Bureau historian will prepare the advertisement and submit it to the appropriate newspaper(s) at least ninety (90) days before the scheduled ready date for the project.
 - b. MDT will offer potential owners the demolition cost of the bridge as an incentive to adopt the historic bridge.
 - (i). If the bridge will be adopted and relocated, then the demolition money may be applied to the reimbursement for the move.
 - (ii). If the bridge will be adopted and left in-place, then the money must be applied to the restoration, rehabilitation or insurance liability for the historic bridge.
 - (iii). Where possible, MDT will encourage and give preference to the adoption of bridges in-place.
- 6. Upon receipt of and consideration of response(s), MDT will determine the disposition of bridges in the Montana Adopt-A-Bridge Program as follows:
 - a. The MDT Bridge Bureau will contact all interested new owners of the historic bridge and request they provide information in writing regarding: the proposed new or in-place location; the intended use of the bridge when adopted; and the ability to assume the liability and responsibility for the bridge.
 - (i) If it is determined that a potential recipient of an historic bridge intends to demolish it for its value as scrap metal, then he/she will be removed from further consideration.
 - b. An FHWA representative, the appropriate MDT District Administrator, the Chief Bridge Engineer, the MDT attorney and the MDT Environmental Services Bureau historian will together select a new owner among viable interested owners based on the written information provided and using criteria described in **Attachment 2** to this Agreement.
 - c. The selected new owner (2nd Party) must agree, in writing, to maintain the bridge and the features that give it its historical significance and assume the liability and responsibility for the bridge once he/she has taken possession of the structure. MDT and/or the county in which the bridge resides or is taken will not be held liable for the bridge once ownership has been transferred to the 2nd Party. A sample copy of the agreement is included as **Attachment 3** to this Agreement.
 - (i) No demolition funds will be provided to the 2nd Party until they have assumed the liability and responsibility for the bridge.
 - d. The MDT Environmental Services Bureau historian will conduct HAER-level documentation of the bridge prior to its adoption (see above, Stipulation 3C).

- e. If the adopted bridge will be relocated, the 2nd Party must remove the bridge from the construction site within 30 days of notification by the MDT Project Manager. The 2nd Party will be provided with the demolition funds once the MDT Bridge Bureau has been notified by the MDT Project Manager that the bridge has been removed from the construction site and relocated.
 - f. If the abutments are determined historically significant, they will be left in place if practicable. MDT will make this determination on a case-by-case basis.
 - g. MDT will ensure that the 2nd Party must maintain the bridge and the features that contribute to its historical significance for a period of no less than 10 years, to be established in the agreement between the 2nd Party and the MDT.
 - h. The 2nd party must assume all future legal and financial responsibility for the bridge, holding MDT harmless in any liability action.
 - i. The 2nd Party will permit access to the relocated bridge by the MDT Environmental Services Bureau historian for up to ten years for monitoring and follow-up documentation purposes. MDT will notify the 2nd Party of any inspection of the bridge ten working days before the visit. MDT shall invite SHPO to participate.
 - j. If the adopted bridge is to be left in-place, the 2nd Party will be provided the demolition funds once documentation detailing plans for restoration or rehabilitation has been received and approved by the MDT District Administrator, the MDT Bridge Bureau and the MDT Environmental Services Bureau historian and an agreement to this effect has been executed. The MDT may consult with the SHPO regarding the plans for restoration or rehabilitation. Rehabilitation shall meet the *Secretary of the Interior's Standards and Guidelines for Rehabilitation* (36 CFR 67).
 - (i) MDT will give the 2nd party a copy of the HAER-level documentation and also specific guidance for historic preservation of the bridge.
 - (ii). MDT will ensure that the 2nd Party must maintain the bridge and the features that contribute to its historical significance for a period of no less than 10 years, to be established in the agreement between the 2nd Party and the MDT.
 - k. The 2nd Party will be responsible for securing any and all necessary permits and easements from appropriate federal and state agencies (i.e. Army Corps of Engineers, Montana Department of Natural Resources and Conservation, etc.), as applicable for the relocation or preservation in-place of an adopted bridge.
7. If no interested new owners respond or no suitable owners are identified, MDT may proceed with the replacement and demolition of the bridge after following the procedures established in Stipulation 3C above.
 8. As part of the biennial Agreement implementation report (Stipulation 5), the success of the Montana Adopt-A-Bridge Program will be reviewed by MDT in consultation with SHPO. If the Montana Adopt-A-Bridge

program is deemed deficient or ineffective in its purpose to preserve historic bridges under public or private ownership, either in place or at alternate locations, then it may be revised through consultation between MDT and SHPO and amendment to this Agreement, pursuant to Stipulation 7.

F). ***Montana Historic Bridge Rehabilitation Program***

1. The Montana Historic Bridge Rehabilitation Program will apply to a select group of NRHP-eligible or potentially eligible state-administered on-system bridges as well as county or city maintained off-system bridges.
 - a. On-system bridges will be selected for the program by the MDT Bridge Bureau and District Administrators, in consultation with the MDT Environmental Services Bureau historian and SHPO.
 - (i) The public will be solicited for its input in the selection process through advertisements in local newspapers.
 - b. Off-System bridges will be selected for the program by the appropriate city and county governments in consultation with the MDT Bridge Bureau and District Administrators, the MDT Environmental Services Bureau historian, and SHPO.
2. The program will initially include 25 NRHP-eligible or potentially eligible bridges (preferably 5 bridges from each of the MDT's five administrative districts). A draft list of these bridges is attached as **Attachment 4** to this Agreement.
3. The selection of bridges for the program will be made by December 31, 2007.
4. All bridges included in the program will be programmed in initial planning by MDT as bridge rehabilitation rather than replacement projects.
5. MDT will address all undertakings with the potential to affect bridges within the Montana Historic Bridge Rehabilitation Program pursuant to all policies and procedures established in 36 CFR 800.
 1. All rehabilitations will meet the *Secretary of the Interior's Standards and Guidelines for Rehabilitation* (36 CFR 67).
 2. Rehabilitation project designs will be reviewed by the MDT historian and submitted to SHPO for consultation pursuant to 36 CFR 800.5-7.
6. In the unlikely event that if, at the time of an undertaking, MDT and SHPO agree that a bridge in the program cannot in fact be rehabilitated because of a new structural condition or other unforeseen factors, another NRHP-eligible bridge must be selected under this Stipulation to replace it in the program within 6 months of the mutual determination.

7. Once a bridge in the program has been successfully rehabilitated, another NRHP-eligible bridge must be selected under the terms of this Stipulation to replace it in the program within 6 months of the completion of the rehabilitation, thereby maintaining 25 bridges in the program at all times. At such time as MDT determines, in consultation with SHPO, that fewer than 25 bridges exist that are eligible for the program, the number of total bridges in the program may decrease accordingly.
8. Within 1½ years of a completed rehabilitation project, MDT will nominate the bridge to the National Register of Historic Places and provide an interpretive sign describing the history and significance of the bridge along with details acknowledging the rehabilitation project.
9. The MDT may develop further procedures for administering the Montana Historic Bridge Rehabilitation Program and submit them to SHPO for comment and concurrence. If MDT and SHPO agree, these procedures may be amended to this agreement, pursuant to Stipulation 7.

4. NATIONAL REGISTER OF HISTORIC PLACES NOMINATIONS AND CONTEXT DEVELOPMENT

For Roads

- A. MDT will nominate the Point of Rocks Segment of the Mullan Military Road (24MN133), with or without the adjacent abandoned Milwaukee Road Railroad grade, to the National Register of Historic Places by December 31, 2007.
 - 1) Within 1 year of the National Register listing, MDT will install interpretive markers about the Mullan Military Road at the I-90 Dena Mora Rest Area and the parking area located adjacent to the road segment at MP 72 on I-90.
- B. MDT will nominate at least one historic road segment in the Montana Historic Highway Program to the National Register of Historic Places every three (3) years beginning in 2008 (see Stipulation 2B) until such time that all roads in the program have been nominated.

For Bridges

- C. MDT in consultation with SHPO will develop National Register Multiple Property Documents (MPD's) for steel truss, reinforced concrete, steel stringer, girder, and timber bridges in Montana.
 1. MDT will submit the draft MPD's to SHPO as they are completed and SHPO will provide comments to MDT within 90 days.

2. Once mutually agreed upon by MDT and SHPO, the MPDs will provide the basis on which historic bridges are evaluated by MDT and SHPO according to the National Register criteria, pursuant to 36 CFR 63 (see Stipulation 3A)
3. As time and opportunity allow, the MDT and SHPO will collaborate to nominate eligible bridges to the National Register of Historic Places under the MPDs and submit both the MPDs and the bridge nominations to the Keeper.

5. EDUCATION AND OUTREACH PROGRAMS

For Roads

- A. MDT will provide funding for the development and installation of five new roadside interpretive markers describing the history and significance of pre-1913 historic roads. The markers will be adjacent to Montana's existing primary and secondary highway system. The marker locations will be determined by MDT in consultation with SHPO.
- B. MDT will expand its historical marker program to MDT-administered Rest Areas to concentrate specifically on Montana's transportation history.
 - a. Ten new markers will be established at Rest Areas by 2015.
 - b. The first interpretive marker will be installed at the Interstate 90 Dena Mora Rest Area and describe the history and significance of the Mullan Military Road to west central Montana (see Stipulation 4A).
 - c. This first marker will be installed by December 31, 2007.
- C. MDT will finance the updating and republishing (with the Montana Historical Society Press or other publisher) of *Montana's Historical Highway Markers* when the current print run of the volume has been exhausted.
- D. MDT will revise and expand its 1993 unpublished document, *Roads to Romance: The Origins and Development of the Road and Trail System in Montana*, by December 31, 2009. Copies will be distributed to SHPO, the Montana Historical Society Library, and other interested parties, organizations, and agencies.

For Bridges

- E. MDT will develop, deploy and maintain a Statewide Bridge Database/GIS in consultation with the Montana SHPO and the Montana State Library's Natural Resource Information System (NRIS) program.
 - a. The initial Statewide Bridge Database/GIS will be completed by December 31, 2007.

- b. Information in the database will include locations, Smithsonian trinomial numbers, National Register evaluations, photographs, bridge type, and brief narrative descriptions and histories of each bridge.
 - c. The production and maintenance of the database will encourage and solicit multi-agency participation, including not only SHPO and NRIS, but also the Forest Service, National Park Service, U.S. Bureau of Land Management, Bureau of Reclamation, Indian Tribal governments, and the Bureau of Indian Affairs.
 - d. The Statewide Bridge Database/GIS will be made available to and shared with the public, interested parties and agencies via the Montana State Library's NRIS website.
- F. MDT will sponsor an historic bridge workshop or seminar in 2008 and again at least once every five (5) years thereafter.
- a. The workshops/seminars will address issues associated with the preservation and rehabilitation of historic bridges.

For Roads and Bridges

- G. MDT will encourage and support the attendance of appropriate MDT employees at regional and national forums (workshops, seminars, conferences) dealing with the preservation of historic roads and bridges.
- H. MDT will develop a "History of the Montana Department of Transportation" PowerPoint presentation, advertise and make it available to the public and interested agencies and organizations. The presentation will be completed by March 31, 2008.
- I. MDT will develop and distribute a "Compilation of Montana Historical Highway Maps" to appropriate schools and agencies by June 30, 2007.
- J. MDT will seek to participate as possible in other historic transportation-related educational and outreach programs on a can-do basis as they may become known.

6. PROGRAMMATIC AGREEMENT IMPLEMENTATION REPORT

- A. Biennially, MDT will complete and distribute a report providing a stipulation-by-stipulation accounting of the implementation of this Agreement.
- B. The report will be provided to the signatories to this Agreement for review and comment.
- C. The first report will be prepared two years from the execution of this Agreement, and every two years thereafter.

7. AGREEMENT MONITORING, AMENDMENT, AND TERMINATION

- A. This Agreement will remain in force until such time that it is terminated by one or more of the signatory parties.
- B. Any signatory to this Agreement may terminate it by providing, in writing, forty-five (45) days notice to the other parties, provided that the parties will consult during the period prior to termination to seek arrangement on amendments or other actions that would avoid termination. In the event of termination, FHWA will comply with 36 CFR 800 with regard to each individual undertaking covered by this Agreement.
- C. The Council and SHPO may monitor any activity carried out pursuant to this Agreement, and the Council will review such activities if so requested. MDT and FHWA will cooperate with the Council and the SHPO in carrying out their monitoring and review responsibilities.
- D. Any signatory of this Agreement may request that it be amended, whereupon the signatories will consult to consider such amendment. An amendment will go into effect when agreed to in writing by all the signatories.

8. OBJECTIONS, DISPUTE RESOLUTION, AND FAILURE TO FULFILL

- A. Should any signatory to this Agreement object within sixty (60) days to any action proposed or undertaken pursuant to this Agreement, the FHWA shall consult with the objecting party to resolve the objection. If the FHWA determines that the objections cannot be resolved, the FHWA shall forward all documentation relevant to the dispute to the Council, including the FHWA's proposed response to the objection. Within thirty (30) calendar days after receipt of all pertinent documentation, the Council will either:
 - 1. advise the FHWA that it concurs with the FHWA response, whereupon the FHWA will respond to the objection accordingly; or
 - 2. advise the FHWA that it should enter into adverse effect consultation pursuant to 36CFR800.6; or
 - 3. provide the FHWA with recommendations, which the FHWA will take into account in reaching a final decision regarding the dispute; or
 - 4. notify the FHWA that it will comment pursuant to 36 CFR 800.7(c), and proceed to comment on the subject of the objection. Any Council comment provided in response to such a request will be taken into account by the FHWA in accordance with 36 CFR 800.7(c)(4) with reference only to the subject of the dispute; the FHWA and MDT's responsibility to carry

5. If the Council fails to provide recommendations or to comment within the specified time period, the FHWA may implement that portion of the undertaking subject to dispute under this Stipulation in accordance with the documentation submitted to the Council for review.
- B. At any time during implementation of the measures stipulated in this Agreement, should any objection to any such measure or its manner of implementation be raised by a member of the public or other non-signatory to the Agreement, the FHWA shall take the objection into account and consult as needed with the objecting party, the SHPO or the Council to address the objection.
 - C. In the event that the FHWA or MDT does not carry out the terms of this Programmatic Agreement, it shall not take any action or make any irreversible commitment that would result in an adverse effect to historic properties or would foreclose the Council's consideration of modifications or alternatives to the undertaking.

Execution and implementation of this Programmatic Agreement evidences that the FHWA has satisfied its Section 106 responsibilities for all individual undertakings subject to the terms of the Agreement.

MONTANA DIVISION, FEDERAL HIGHWAY ADMINISTRATION

By: 
Ted Burch, Program Development Engineer

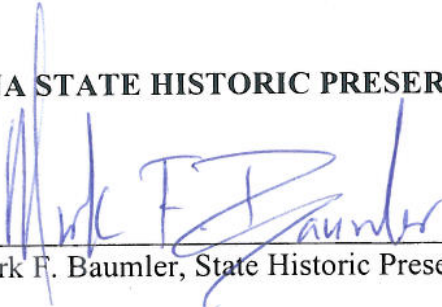
Date: 12/12/2006

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: 
John M. Fowler, Executive Director

Date: 2/1/07

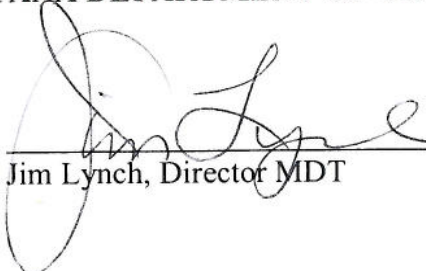
MONTANA STATE HISTORIC PRESERVATION OFFICE

By: 
Mark F. Baumler, State Historic Preservation Officer

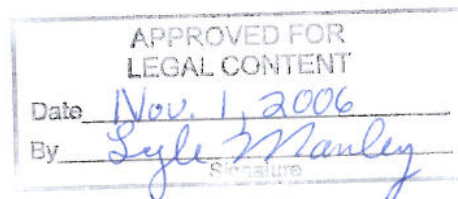
Date: 12/18/2006

CONCUR:

MONTANA DEPARTMENT OF TRANSPORTATION

By: 
Jim Lynch, Director MDT

Date: 1/08/07



Attachment 1: To be Determined/ December 1, 2007

Attachment 2: Criteria for Selection of New Owner: Adopt-A-Bridge Program

The intent of the Adopt-A-Bridge program is to maintain the historic integrity of the existing bridge to the greatest extent possible. Greater consideration will be given to leaving the structure in place and for providing the highest use for the largest population possible.

The selection criteria noted below (in descending order of preference) will be used as a guide in the event two or more entities express an interest in the bridge.

- I. Leave in place
 - a. Adoption by government agency
 - b. Adoption by an established civic group
 - c. Adoption by a non-incorporated group.
 - d. Adoption by an individual

- II. Move to a New Location
 - a. Adoption by a government agency
 - b. Adoption by an established civic group
 - c. Adoption by a non-incorporated group
 - d. Adoption by an individual

If there is no obvious choice for a new owner by using these guides, the new owner will be selected by lot.

The new owner will be required to sign an agreement holding the State, county and/or city harmless for any structural problems or lead paint associated with the bridge. This agreement will contain the conditions by which the new owner will agree to be a "responsible party" and agree to maintain the historic integrity of the structure.

Under criteria I (b, c or d), the new owners will be required to provide a bond in an amount to be determined by the State to cover the cost of future demolition of the structure. The bond will be used in the event the new owner defaults on his/her commitment for care and maintenance of the bridge.

Applicants will be required to submit the following information in writing:

- 1) New owner of the structure
- 2) What will be the intended use of the bridge?
- 3) Who will use the bridge?
- 4) Where will the bridge be located?
- 5) If moved to a new site, how will this be accomplished?

The new owner will receive the "estimated cost" of removal to relocate/rehab the bridge unless the project goes to bid in which case the "bid amount" for the low bidder will be used.

This policy will also be used for bridges that are selected for adoption but are not on or eligible for listing on the National Register of Historic Places. In those cases the agreement may or may not require maintaining the historic integrity of the structure. The amount available to relocate/rehab the structure will be 80% of the estimated (or bid) amount to remove the structure.

Attachment 3: Sample Agreement for the Adopt-A-Bridge Program.

AGREEMENT

WHEREAS, _____ County and the State of Montana, through the Montana Department of Transportation (collectively hereinafter referred to as "Owners"), are in the process of proposing a new bridge at or near the location of the current Bridge, (hereinafter "Bridge") over the _____ River; and

WHEREAS, Owners are considering the possibility that the current bridge will be either abandoned or dismantled as a result of the building of a new bridge; and

WHEREAS, 23 U.S.C. 144(o)(4), states in part, "Any State which proposes to demolish a historic bridge for a replacement project with funds made available to carry out this section shall first make the bridge available for donation to a State, locality, or responsible private entity if such State, locality, or responsible entity enters into an agreement to-

(A) maintain the bridge and the features that give it its historic significance; and

(B) assume all future legal and financial responsibility for the bridge, which may include an agreement to hold the State highway agency harmless in any liability action."

WHEREAS, in consideration of the estimated cost of demolition of the Bridge, the _____ has agreed to hold Owners harmless in any liability action, and to assume all future liability associated with the Bridge regardless of whether it is to remain in place or to be removed. Therefore, the parties agree as follows:

This agreement is entered into this ____ day of _____. 20__, between Owners and _____.

The purpose of this agreement is to provide for indemnification and hold harmless provisions Owner will transfer ownership of the bridge and the expected cost of demolition to _____. The expected cost of demolition is \$_____. This amount is to be used solely for restoration in place, or movement, placement and restoration in new location, of the Bridge. Further, _____ agree to accept ownership of the Bridge and maintain the Bridge and the features that give it its historic significance.

_____, its directors, supervisors, agents and employees, covenants not to sue and agrees to indemnify the Owners, its agents and employees, and save each of them harmless from itself and any third parties for personal injuries, property damage, loss of life or property, civil penalties, or criminal fines resulting from or in any way

connected with ownership and activities on the Bridge or the Owners' actions or non-actions taken after the signing of this agreement.

Further, _____ agrees to protect, defend, and save the Owners harmless from and against all claims, demands, and causes of action of any kind or character, including defense costs, arising in favor of the _____'s employees or third parties, on account of bodily or personal injuries, death, or damage to property arising out of services performed or omissions of the _____ and/or its employees, subcontractors, or representatives and the state under this agreement.

Further, _____, its directors supervisors, agents and employees, covenant not to sue and indemnifies the Owners, their agents and employees from any and all third party claims and liability arising or related to all common law claims, civil and criminal statutory and regulatory claims, including, but not limited to, any and all claims arising from or in any way related to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C.6901, et seq., the Clean Water Act, as amended, 33 U.S.C. 1251, et seq., the Clean Air Act, as amended, 42 U.S.C. 741 et seq., the Solid Waste Disposal Act, as amended, 42 U.S.C. 6901, et seq., including civil and criminal penalties assessed by any federal, state, regional or local government entity or court for actions or non-actions by Owners, or , in any manner relating to or arising from ownership or activities upon this Bridge.

_____ further agrees that any funds that they receive pursuant to this agreement will be used for either the restoration of the Bridge or its proper removal to another location. In either event, the Bridge must maintain its historic character.

_____ must provide and maintain, at its cost and expense, insurance against claims for injuries to persons or damages to property including contractual liability which may arise from or in connection with the performance of work performed by the _____, its agents, representatives, officers, assigns or employees.

_____ in completing its obligations under this agreement shall at all times observe and comply with all existing laws, ordinances, and regulations, and other agencies of government and save them harmless from all claims and liabilities due to negligent acts of its subcontractors, agents or employees during the performance of the work called for under this agreement.

This agreement contains the entire agreement between the parties and no statements, promises, or inducements made by either party which are not contained in this written agreement shall be binding or valid.

DATED this _____ day of _____, 20__.

MONTANA DEPARTMENT OF TRANSPORTATION

By _____

COUNTY OF _____

By _____

Attachment 4: Draft list bridges proposed for Historic Bridge Rehabilitation Program

	Bridge	Number
	Missoula District	
1.	Swan River at Bigfork	L15672000+02001
2.	Kootenai River at Troy	L27411000+01001
3.	Blackfoot River south of Clearwater Junction	L32406002+06001
4.	Noxon Bridge	L45260000+01001
5.	Little Blackfoot River SW of Avon	L39311000+01001
	Butte District	
6.	Ferry Creek Bridge NE of Livingston	L34003001+07001
7.	Missouri River at Toston (truss)	L04415000+01001
8.	Big Hole River near Glen (Kalsta Bridge)	L01311022+02001
9.	Red Rock River 4 mi. NW of Lima	L01266000+05001
10.	Gallatin River/Axtell Bridge	L16494000+05001
11.	Yellowstone River/Carbella Bridge	L34301000+03001
12.	Jefferson River north of Three Forks	L16216002+02001
	Great Falls District	
13.	Missouri River NE of Wolf Creek	L25003011+00001
14.	25 th Street North at Great Falls	U05217001+05401
15.	Marias River/Pugsley Bridge	L26038005+01001
16.	Missouri River at Hardy	L07604006+04001
17.	Milk River west of Zurich	L03325000+04001
18.	Fresno Reservoir Spillway	L21014002+07001
19.	Little Prickly Pear Creek/Jack Walsh Bridge	L25005007+00001
	Glendive District	
20.	Powder River at Locate	L09307000+03001
21.	Bad Route Creek	L11109020+03001
22.	Locate Creek	L09305003+03001
23.	Yellowstone River at Fallon	L40114001+05001
24.	Powder River west of Terry	L40004006+02001
25.	Beaver Creek Bridge	L36206000+05001
	Billings District	
26.	Bluewater Creek southeast of Fromberg	L05302008+06001
27.	East Rosebud Creek at Rosebud	L05503000+01001
28.	Fred Robinson Bridge	P00061088+00671
29.	Big Horn River at Custer	L56104002+05001
30.	Musselshell River 7 mi. NE of Roundup	L33017000+04001
31.	Dry Wolf Creek	L23101010+04001
32.	Judith River Bridge	L23006001+00001
33.	Musselshell River/Goffena Bridge (timber truss)	L33035000+02001
34.	Yellowstone River SE of Reed Point	L48115000+08001



P00011055+09401

Location : NE LIVINGSTON Structure Name: none

General Location Data

District Code, Number, Location : **02** Dist 2 **BUTTE** Division Code, Location : **22** **BOZEMAN**
County Code, Location : **067** **PARK** City Code, Location : **00000** **RURAL AREA**
Kind fo Hwy Code, Description : **2** **2 U.S. Numbered Hwy** Signed Route Number : **00089**
Str Owner Code, Description : **1** **State Highway Agency** Maintained by Code, Description : **1** **State Highway Agency**
Intersecting Feature : **YELLOWSTONE RIVER** Kilometer Post, Mile Post : **90.03 km** **55.94**
Structure on the State Highway System : ☒ Latitude : **45°40'24"**
Structure on the National Highway System : ☐ Longitude : **110°32'06"**
Str Meet or Exceed NBIS Bridge Length : ☒

Construction Data

Construction Project Number : **NRH 117 B**
Construction Station Number : **50+88.00**
Construction Drawing Number : **1130**
Construction Year : **1934**
Reconstruction Year :

Traffic Data

Current ADT : **2,650** ADT Count Year : **2005** Percent Trucks : **2 %**

Structure Loading, Rating and Posting Data**Loading Data :**

Design Loading :		2 M 13.5 (H 15)
Inventory Load, Design :	18.1 mton	2 AS Allowable Stress
Operating Load, Design :	25.4 mton	2 AS Allowable Stress
Posting :		5 At/Above Legal Loads

Rating Data :

	Operating	Inventory	Posting
Truck 1 Type 3 :			
Truck 2 Type 3-S3 :			
Truck 3 Type 3-3 :	54		

Structure, Roadway and Clearance Data**Structure Deck, Roadway and Span Data :**

Structure Length : **153.62 m**
Deck Area : **1,180.00 m sq**
Deck Roadway Width : **6.64 m**
Approach Roadway Width : **6.71 m**
Median Code, Description : **0 No median**

Structure Vertical and Horizontal Clearance Data :

Vertical Clearance Over the Structure : **99.99 m**
Reference Feature for Vertical Clearance : **N Feature not hwy or RR**
Vertical Clearance Under the Structure : **0.00 m**
Reference Feature for Lateral Underclearance : **N Feature not hwy or RR**
Minimum Lateral Under Clearance Right : **0.00 m**
Minimum Lateral Under Clearance Left : **0.00 m**

Span Data**Main Span**Number Spans : **5**Material Type Code, Description : **4 Steel continuous**Span Design Code, Description : **3 Girder and Floorbeam System****Deck**

Deck Structure Type : **1 Concrete Cast-in-Place**
Deck Surfacing Type : **1 Monolithic concrete (concurrently placed with struct**
Deck Protection Type : **0 None**
Deck Membrain Type : **0 None**

Approach SpanNumber of Spans : **0**

Material Type Code, Description :

Span Design Code, Description :

**Structure Vertical and Horizontal Clearance Data Inventory Route :**

Over / Under Direction Name	Inventory Route	South, East or Bi-directional Travel			North or West Travel		
		Direction	Vertical	Horizontal	Direction	Vertical	Horizontal
Route On Structure	P00011	Both	99.99 m	6.64 m	N/A		

P00011055+09401

Continue

Inspection Data

Sufficiency Rating : **57.6**

Health Index : **96.39**

Structure Status :Func Obs - Elg Rehab

Inspection Due Date : 03 February 2007

(91) Inspection Frequency (months) : **24**

Next Fracture Critical Due Date : 03 Feb 2007

Fracture Critical Detail : **Sup/sub integrl fram det**

Next Under Water Insp : **27 Jul 2010**

Under Water Insp Type : **Type II**

NBI Inspection Data

(90) Date of Last Inspection : 03 February 2005

Last Inspected By : Daniel Gravage - 71

(90) Inspection Date :

Inspected By :

(58) Deck Rating : 6

(68) Deck Geometry : 2

(36C) Approach Rail Rating	0	
----------------------------	---	--

(62) Culvert Rating :

N	
---	--

(59) Superstructure Rating : 8

(67) Structure Rating : 5

(36A) Bridge Rail Rating :	0	
----------------------------	---	--

(61) Channel Rating : 8

(60) Substructure Rating : 7

[illegible]

(36B) Transition Rating :	0	
---------------------------	---	--

(71) Waterway Adequacy	6	
------------------------	---	--

(72) App Rdwy Align :	6	
-----------------------	---	--

	N	
(11) B. 4. 0. 1	A	

(36D) End Rail Rating :	0	
-------------------------	---	--

(113) Scour Critical : 4

Unrepaired Spalls :	1 m sq	
---------------------	--------	--

Deck Surfacing Depth : 0.00 in

Inspection Hours

Crew Hours for inspection :

Snooper Required : ☒ Y

Helper Hours :	-1	
----------------	----	--

Snooper Hours for inspection : 2.5

Special Crew Hours :	2.5	
----------------------	-----	--

Flagger Hours :	2.5
-----------------	-----

Special Equipment Hours :	-1	
---------------------------	----	--

Inspection Work Candidates		Status	Priority	Effected Structure Unit	Scope of Work	Action	Covered Condition States
Candidate ID	Date Requested						



INITIAL ASSESSMENT FORM FOR STRUCTURE :

P00011055+09401

Continue

Element Inspection Data

***** Span : Main-0 - -1 *****

Element Description										
Smart Flag	Scale Factor	Env	Quantity	Units	Insp Each	Pct Stat 1	Pct Stat 2	Pct Stat 3	Pct Stat 4	Pct Stat 5
Element 12 - Bare Concrete Deck										
	1	3	1180	sq.m.	X	0	100	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - Deck surface unchanged from last inspection. HZDX										
08/06/2002 - Cracking in deck surface mostly the same. JZJZ										
07/13/2000 - Longitudinal cracks seem to be getting worse. MGCZ										
04/27/1998 - Concrete deck surface has medium to heavy cracking with several popouts thru out deck surface. Span 2 has heavy longitudinal cracks, span 3 has random map cracking. Break up of concrete west bridge end has been patched with asphalt that is breaking up VJKR										
06/20/1996 - None UCCK										
05/01/1994 - None REFI										
Inspection Notes:										
Element 107 - Paint Stil Opn Girder										
	1	2	305	m.		100	0	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None HZDX										
08/06/2002 - None JZJZ										
07/13/2000 - None MGCZ										
04/27/1998 - None VJKR										
06/20/1996 - None UCCK										
05/01/1994 - None REFI										
Inspection Notes:										
Element 152 - Paint Stil Floor Beam										
	1	2	386	m.		100	0	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None HZDX										
08/06/2002 - None JZJZ										
07/13/2000 - _ MGCZ										
Inspection Notes:										

***** Span : Main-0 --1 (cont.) *****

Element Description										
Smart Flag	Scale Factor	Env	Quantity	Units	Insp Each	Pct Stat 1	Pct Stat 2	Pct Stat 3	Pct Stat 4	Pct Stat 5
Element 181 - Pnt Vrt X-Frame										
	1	2	123	m.		90	10	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - No changes.										MGCZ
04/27/1998 - Medium to heavy rusting of diaphragms under sliding plate joints.										VJKR
Inspection Notes:										
Element 205 - R/Conc Column										
	1	3	2	ea.		100	0	0	0	
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - LW - Added after review of Underwater Inspection Report 8/24/98 (Guthrie Diving Co) -- At high water levels, may not be apparent or inspectable.										MGCZ
Inspection Notes:										
Element 210 - R/Conc Pier Wall										
	1	3	23	m.		100	0	0	0	
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - No changes.										MGCZ
LW -- Piers 2,3,&4 UNDERwater Inspection 8/24/98 (Guthrie Diving Co) -- Piers are in good condition with no areas of significant deterioration or distress. Pier 3 has small verticle cracks. All footings are exposed.										
04/27/1998 - Vertical crack at upstream end along ice breaker and at downstream p-3. Scaling of concrete at waterline of all piers. Some scour of P-2 showing by stabbing around pier. Doesn't seem to be below footing where we stabbed.										VJKR
06/20/1996 - None										UCCK
05/01/1994 - None										REFI
Inspection Notes:										

P00011055+09401

Continue

***** Span : Main-0 --1 (cont.) *****

Element Description										
Smart Flag	Scale Factor	Env	Quantity	Units	Insp Each	Pct Stat 1	Pct Stat 2	Pct Stat 3	Pct Stat 4	Pct Stat 5
Element 215 - R/Conc Abutment										
	1	3	22	m.		100	0	0	0	
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - No changes.										MGCZ
04/27/1998 - Heavy efflor. between top pf backwall and deck haunch. Heavy cracking of concrete backwall and wingwalls abut 1.										VJKR
06/20/1996 - None										UCCK
05/01/1994 - None										REFI
Inspection Notes:										
Element 220 - R/C Sub Pile Cap/Ftg										
	1	4	3	ea.		100	0	0	0	
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - LW -- Pier 2,3,&4 Underwater Inspection 8/24/98 (Guthrie Diving Co) -- All have footings exposed. Pier 2 also has subfooting exposed.										MGCZ
Inspection Notes:										
Element 227 - R/C Submerged Pile										
	1	4	2	ea.		100	0	0	0	
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - LW -- Pler 5 Underwater Inspection 8/24/98 (Guthrie Diving Co) -- Pler is in good condition. No areas of significant deterioration or distress. Debris at upstream point.										MGCZ
Inspection Notes:										
Element 234 - R/Conc Cap										
	1	2	32	m.		70	30	0	0	
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - No changes.										MGCZ
04/27/1998 - Light random cracking of concrete caps.										VJKR
06/20/1996 - None										UCCK
05/01/1994 - None										REFI
Inspection Notes:										



INITIAL ASSESSMENT FORM FOR STRUCTURE :

P00011055+09401

Continue

***** Span : Main-0 --1 (cont.) *****

Element Description										
Smart Flag	Scale Factor	Env	Quantity	Units	Insp Each	Pct Stat 1	Pct Stat 2	Pct Stat 3	Pct Stat 4	Pct Stat 5
Element 304 - Open Expansion Joint										
	1	3	32	m.		100	0	0		
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - No changes.										MGCZ
04/27/1998 - Sliding plate joints allow moisture to leak thru on to diaphragm.										VJKR
06/20/1996 - None										UCCK
05/01/1994 - None										REFI
Inspection Notes:										
Element 311 - Moveable Bearing										
	1	3	6	ea.		100	0	0		
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - None										MGCZ
04/27/1998 - None										VJKR
06/20/1996 - None										UCCK
05/01/1994 - None										REFI
Inspection Notes:										
Element 313 - Fixed Bearing										
	1	2	6	ea.		100	0	0		
						%	%	%	%	%
Previous Inspection Notes :										
02/03/2005 - None										HZDX
08/06/2002 - None										JZJZ
07/13/2000 - None										MGCZ
04/27/1998 - None										VJKR
06/20/1996 - None										UCCK
05/01/1994 - None										REFI
Inspection Notes:										

P00011055+09401

Continue

***** Span : Main-0 - -1 (cont.) *****

Element Description										
Smart Flag	Scale Factor	Env	Quantity	Units	Insp Each	Pct Stat 1	Pct Stat 2	Pct Stat 3	Pct Stat 4	Pct Stat 5
Element 331 - Conc Bridge Railing										
	1	2	305	m.		70	30	0	0	
						%	%	%	%	%

Previous Inspection Notes :

02/03/2005 - Additional post tops have been impacted/repaired.

H7DX

08/06/2002 - None

JZJZ

07/13/2000 - No changes.

04/27/1998 - Several rail posts thru out structure have some cracking and light spalls. Vehicle damage to tops of several posts.

Inspection Notes:

General Inspection Notes

02/03/2005 - None

HZDX

08/06/2002 - None

07/13/2000 - None

04/27/1998 - None

06/20/1996 - Sufficiency Rating Calculation Accepted by ops\$u5963 at 3/10/97 14:28:01

UCCK

Sufficiency Rating Calculation Accepted by OPSS\$U9004 at 2/19/97 14:34:26

U5963 inspection comments -

Structure P00011055+09401 -

Date 9/4/96 -

Previous comments > (none)

05/01/1994 -

01/01/1992 - Updated with tape 1994

04/01/1990 - Updated with tape 1992

01/01/1988 - Updated with tape 1989

07/01/1985 - Updated with tape 1988

01/01/1983 - Updated with tape 1984

02/01/1980 - Updated with tape 1982

STRUCTURE INSPECTION SCHEDULE SUMMARY FOR:

Printing Date: 25 January 2007

Dist 2

BUTTE

Form BMS002b

Area : BOZEMAN

County: **PARK**

Owner : 01 State Highway Agency

Structure on System ☒

Structure ID	KM Post	Intersecting Feature	Type of Highway	Maintained by	NBI Len	On the NHS	Type of Inspection	Insp Req	Inspection Frequency	Last Inspection Date	Next Inspection Date	Comments
P00011055+09401	90.03	YELLOWSTONE RIVER	U.S. Numbered H	01 State Highway Ag	X		NBI/Element		24	03 FEB 2005	03 FEB 2007	
Crew Hours for Inspection :				1			Fracture Critical	Y	24	03 FEB 2005	03 FEB 2007	Sup/sub integrl fram de
Snooper Required for Inspection :				Y			Under Water	Y	48	27 JUL 2006	27 JUL 2010	UW Insp type : II
Snooper Hours for Inspection :				2.5			Special	N				



2006060701

Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Jim Lynch, Director
Brian Schweitzer, Governor

June 6, 2006

Stan Wilmoth, Ph.D.
State Historic Preservation Office
1410 8th Avenue
P O Box 201202
Helena, MT 59620-1202

CONCUR
MONTANA SHPO

DATE 21 Jun 06 SIGNED [Signature]

RECEIVED

JUN 23 2006

BY: SHP ENVIRONMENTAL

Subject: BR 11-1(44)56
Yellowstone River -- NE of Livingston
Control No. 4790

MDT
Yellowstone River
NE of Livingston

Dear Stan:

Enclosed is the Determination of Effect for the above project in Park County. We have determined that the proposed bridge replacement project would have No Adverse Effect to the 988 Rainbow Motel (24PA1185), No Effect to the KPRK Radio Station (24PA1120) and Northern Pacific Railway Grade & Bridge (24PA1120) and an Adverse Effect to the Yellowstone River Bridge (24PA1078) for the reasons specified in the document. The Adverse Effect to the bridge will be handled under the terms of the Historic Roads & Bridges Programmatic Agreement. We request your concurrence.

If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

Enclosure

cc: Jeff Ebert, P.E., Butte District Administrator
Kent Barnes, P.E., Bridge Engineer
Bonnie Steg, Resources Section

DETERMINATION OF EFFECT

BR 11-1(44)56

Yellowstone River – NE of Livingston

Control No. 4790

Introduction

The Montana Department of Transportation (MDT) intends to replace a bridge and reconstruct the approaches on US Highway 89 at the northeast edge of Livingston in Park County, Montana. The project begins at Milepost 55.875 and proceeds northeasterly 1.014 miles to Milepost 56.889. The existing bridge and roadway approaches were constructed in 1934. Other than routine maintenance there have been no significant changes to this bridge and roadway since they were constructed. The existing roadway is 28-feet wide throughout the project area. Figure 1 shows the project area.

The Yellowstone River – NE of Livingston project would consist of the construction of a new bridge slightly downstream of the existing bridge's location. It is the intent of the project to construct a new bridge with new approaches. The approaches would be 35-feet wide and transition to 39-feet at the bridge. New Right-of-Way (R/W) would be required for this project.

Significant Cultural Resources

A cultural resource survey of the project area was conducted in 2003. The MDT and the Montana State Historic Preservation (SHPO) concurred in the National Register of Historic Places (NRHP) eligibility of one historic site within the project area: the Rainbow Motel (24PA1185). Also located within the Area of Potential Effect for this project is the NRHP-listed KPRK Radio Station (24PA988). The NRHP-eligible Yellowstone River Bridge (24PA1078) and the Northern Pacific Railroad Grade and Bridge (24PA1120) are also located within the APE for this project.

The Rainbow Motel consists of five buildings that were constructed in 1947 and about 1952.

✓ The site has functioned as a motel since its construction. It retains sufficient integrity and association with the post-World War II tourism boom and car culture to be eligible for the National Register under Criteria A and C.

✓ Listed on the National Register in 1979, the KPRK Radio Station was designed in 1946 and built in 1947. It is an exemplary example of a neo-Art Deco building and was recognized for that fact by its listing on the NRHP.

✓ The Yellowstone River Bridge was constructed in 1934 and is a fine example of a Great Depression-era steel girder bridge. The 5-span structure retains all of its original structural components and features and is eligible for the NRHP under Criteria A and C.

✓ The Northern Pacific Railroad Grade and Bridge is associated with the economic and social development of not only the Livingston area, but Montana. The grade and bridge, which is still active and now owned by Montana Rail Link, retains its significance to Montana history and is eligible for the NRHP under Criteria A and C.

Figure 1. Map showing the location of the MDT's Yellowstone River – NE of Livingston project.

Project Impact

A preliminary design of the Yellowstone River – NE of Livingston project has been completed and a copy of the plans in the vicinity of the historic sites is attached (Figures 2 & 3).

The existing centerline would be perpetuated at the Rainbow Motel (24PA1185). It is 98-feet from the historic property on top of a fill slope. The access to the site leads down the slope to the courtyard of the motel. The existing pavement edge is 84-feet from the site. Proposed widening of the roadway from the existing 28-feet to the proposed 35-feet would place the pavement edge at 80.5 feet from the site, or about 3.5 feet closer. The widening would consist mostly of paved shoulder. The fill slope would be reconstructed to accommodate the wider roadway. The toe of the slope would be 33± feet from the property, or about 30 feet closer. The proposed R/W line would be located close to the site, but fencing would not delineate the R/W.

At the KPRK Radio Station (24PA988), the proposed centerline would be shifted 13± feet to the north and away from the National Register-listed site to accommodate the new bridge alignment. The existing centerline is 144-feet from the property and the proposed centerline would be 157± feet from the property. The existing pavement edge is at the top of a fill slope 130-feet from the radio station. The proposed pavement edge would be located atop a fill slope at 139.5± feet from the site. The roadway, however, would be widened 7-feet or 3.5 feet in the direction of the historic property. The fill slope would be reconstructed with the toe of the slope being located 85-feet from the building. The proposed R/W boundaries would not extend to encompass the building. A fishing access site (FAS) would be developed to the east of the building opposite an existing access road. The alignment, width, and surfacing of the road would be perpetuated. The FAS would be landscaped to conform with the existing environment.

The existing Yellowstone River Bridge (24PA1078) would be removed as a result of the proposed project. Because of existing environmental conditions and the recommendations of the Governor-appointed Upper Yellowstone Task Force, the bridge would be removed and no effort made to preserve it in place.

It is the intent of the project to minimize any impact to the existing Northern Pacific Railway Grade and Bridge (24PA1120). Although the roadway would move closer to the grade for a distance of 918± feet on the west side of the existing bridge, it would not encroach on the railroad's R/W. The existing railroad alignment would be perpetuated and there would be no change to the existing railroad bridge.

Project Effect

There would be **No Adverse Effect** to the NRHP-eligible Rainbow Motel (24PA1185) as a result of the proposed project. Although the existing centerline would be perpetuated, the roadway would be widened 3.5 feet closer to the property necessitating the reconstruction of the existing fill slope. The toe of the fill slope would be located closer to the property, but it would not encroach onto any of the site's existing buildings and there would be no physical damage or modification made to them as a result of the project. The site's historic function would be perpetuated and it would not be abandoned, neglected or sold because of the project. All atmospheric impacts would be temporary in nature and mitigated by the existing state and federal

air quality regulations. There would be no significant change in the setting of the property as a two lane roadway would be perpetuated. Widening would consist primarily of a paved shoulder in the proximity of the site. The setting change would be in the reconstruction of the fill slope.

There would be **No Effect** to the NRHP-listed KPRK Radio Station. The centerline would be shifted $13\pm$ feet away from the property. Because the proposed centerline would be located farther away from the property, the proposed pavement edge would be located 9.5 feet further away from the site. The existing fill slope would be reconstructed, but it would not encroach significantly upon the property. There would be no encroachment of the site by construction activities and, consequently, no physical damage or alteration to the building caused by the project. It would continue with its existing appearance and historic function during and after construction. There would be no significant change in the setting of the property as a two-lane roadway would be perpetuated; widening would consist primarily of the addition of a paved shoulder on the proximal side of the roadway. None of the Criteria for Adverse Effect apply in this instance.

There would be an **Adverse Effect** to the Yellowstone River Bridge (24PA1078) as a result of the proposed project. The bridge would be removed and a new structure constructed to take its place. The bridge will be handled under the terms of the Historic Roads & Bridges Programmatic Agreement.

There would be **No Effect** to the National Register-eligible Northern Pacific Railway Grade & Bridge (24PA1120) as a result of the proposed MDT project. All construction activities would be located outside the existing railroad R/W on both sides of the Yellowstone River. There would be no encroachment of the railroad's R/W and the existing alignment and historic function would be perpetuated. The existing railroad bridge would not be replaced as part of this project and it would continue to maintain its historic function and appearance. The characteristics that make the site eligible for the National Register would not be diminished in any way and it would retain its status as a significant site to Montana history. The setting would also not be significantly impacted by the project.

Appendix F Agency Coordination

See Appendix B: Farmland Conversion Impact Rating

NRCS Letter and Attachment to Laura Hunter from Tony Rolfes dated 4/21/02

See Appendix C: Cultural Resources

Montana Historical Society Letter and Attachments to Laura Hunter from Damon Murdo dated April 1, 2003

City Manager

Edwin R. Meece

(406) 222-2005 phone

(406) 222-6823 fax

citymanager@ci.livingston.mt.us

ci.livingston.mt.us

City of Livingston

Incorporated 1889

Chairman

Steve Caldwell

Vice Chairman

Vicki Blakeman

Commissioners

Mary Beebe

Bob Ebinger

Patricia Grabow

May 29, 2007

Mr. Tom Gocksch
Montana Dept. of Transportation
PO Box 201001
Helena MT 59620-1001

**MASTER FILE
COPY****RECEIVED**

MAY 31 2007

ENVIRONMENTAL

Mr. Gocksch:

The City of Livingston requests, and agrees to serve, as a Cooperating Agency for the Yellowstone River bridge project (Control # 4790). Please advise me when further action, and or review activity, is desired.

Respectfully,

C: File

Clint Tinsley



City Manager
Steve Golnar

(406) 222-2005 phone
(406) 222-6823 fax
citymanager@ci.livingston.mt.us
ci.livingston.mt.us

City Commission
Vicki Blakeman
Robert Ebinger
Mary Beebe
Steve Caldwell
Patricia Grabow

April 27, 2005

Mr. Brian Miller,
Bridge Engineer
MDOT
P.O. Box 201001
Helena, MT 59620

Mr. Miller,

This letter will serve as a formal request from the City of Livingston to have included in the design of the Highway 10/89 Yellowstone River bridge replacement project, accommodations for both a twelve (12) inch sanitary sewer line and a twelve (12) inch water line. This will allow the City to get utility services across the river using the new bridge structure.

Thank you for your consideration.

Sincerely,


Steve Golnar
City Manager

cc: Clint Tinsley, Public Works Dir.

DATE REC'D 5/2/05			
ACT	INFO		INI
		BRIDGE BUREAU	
		BRIDGE ENG.	
		BR. DES. ENG.	
		ADMIN ASSIST.	
		AE/MISSOULA	
		AE/BUTTE	
		AE/GT FALLS	
		AE/GLENDIVE	
		AE/BILLINGS	
		SEISMIC	
		BR. MNGT. ENG.	
		STEEL QA/QC	
		SHP DWGS	
		CADD COOR.	
		LIBRARY	
		FILE	



RECD AUG 28 2006



P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • fax 406.444.0581 • tel 406.444.5354 • <http://mtnhp.org>

August 21, 2006

Kate Randall
David Evans & Associates
1331 17th St. Suite 900
Denver, CO 80202

Dear Kate,

I am writing in response to your request for information on plant and animal species of special concern in the vicinity of the U.S. Highway 89 Bridge over the Yellowstone River project in T02S, R10E; Section 07 in Park County. We checked our databases for information in this general area and have enclosed 2 species of concern reports, 1 ecological site report, explanatory material, and one map.

Please keep in mind the following when using and interpreting the enclosed information and maps:

- (1) These materials are the result of a search of our database for species of concern that occur in an area defined by requested township, range and sections with an additional one-mile buffer surrounding the requested area. This is done to provide you with a more inclusive set of records and to capture records that may be immediately adjacent to the requested area. Reports are provided for the species of concern that are located in your requested area with approximately a one-mile buffer. Species of concern outside of this area may be depicted on the map but are not reported.
- (2) On the map, polygons represent one or more source features as well as the locational uncertainty associated with the source features. A source feature is a point, line, or polygon that is the basic mapping unit of an EO Representation. The recorded location of the occurrence may vary from its true location due to many factors, including the level of expertise of the data collector, differences in survey techniques and equipment used, and the amount and type of information obtained. Therefore, this inaccuracy is characterized as locational uncertainty, and is now incorporated in the representation of an EO. If you have a question concerning a specific EO, please do not hesitate to contact us.
- (3) This report may include sensitive data, and is not intended for general distribution, publication or for use outside of your agency. In particular, public release of specific location information may jeopardize the welfare of threatened, endangered, or sensitive species or communities.
- (4) The accompanying map(s) display management status, which may differ from ownership. Also, this report may include data from privately owned lands, and approval by the landowner is advisable if

specific location information is considered for distribution. Features shown on this map do not imply public access to any lands.

- (5) Additional information on species habitat, ecology and management is available on our web site in the Plant and Animal Field Guides, which we encourage you to consult for valuable information. You can access these guides at <http://mtnhp.org>. General information on any species can be found by accessing the link to NatureServe Explorer.**

The results of a data search by the Montana Natural Heritage Program reflect the current status of our data collection efforts. These results are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys, which may be required for environmental assessments. The information is intended for project screening only with respect to species of concern, and not as a determination of environmental impacts, which should be gained in consultation with appropriate agencies and authorities.

I hope the enclosed information is helpful to you. If in the future you would prefer to receive a digital PDF report instead of paper, just let me know. Please feel free to contact me at (406) 444-3009 or via my e-mail address, below, should you have any questions or require additional information.

Sincerely,



Kathy Lloyd
Montana Natural Heritage Program
klloyd@mt.gov



Montana Natural Heritage Program

1515 East Sixth Ave., Helena, Montana 59620-1800

(406) 444-5354

<http://mtnhp.org>

Explanation of Species of Concern Reports

Since 1985, the Montana Natural Heritage Program (MTNHP) has been compiling and maintaining an inventory of elements of biological diversity in Montana. This inventory includes plant species, animal species, plant communities, and other biological features that are rare, endemic, disjunct, threatened, or endangered throughout their range in Montana, vulnerable to extirpation from Montana, or in need of further research.

Element Occurrences: Individual species, communities, or biological features are referred to as “elements.” An “**Element Occurrence**” (EO) is an area depicting only what is known from direct observation with a defined level of certainty regarding the spatial location of the feature. If an observation can be associated with a map feature that can be tracked (e.g., a wetland) then this polygon feature is used to represent the EO. No inferences beyond the direct observation, and associated uncertainty, can be made and still called an Element Occurrence. An “Element Occurrence” generally falls into one of the following three categories:

Plants: A documented location of a specimen collection or observed plant population. In some instances, adjacent, spatially separated clusters are considered subpopulations and are grouped as one occurrence (e.g., the subpopulations occur in ecologically similar habitats, and are within approximately one air mile of one another).

Animals: The location of a specimen collection or of a verified sighting; assumed to represent a breeding population. Additional collections or sightings are often appended to the original record.

Other: Significant biological features not included in the above categories, such as bird rookeries, peatlands, or state champion trees.

Inferred Extents: Areas that can be inferred as probable occupied habitat based on direct observation of a species location and what is known about the foraging area or home range size of the species.

Ecological Information: Areas for which we have ecological information are represented on the map as either shaded polygons (where small and/or well defined) or simply as map labels (where they are large generally-defined landscapes). Descriptive information about these areas is contained in the associated report. Such information can be useful in assessing biological values and interpreting Species of Concern data.

The quantity and quality of data contained in MTNHP reports is dependent on the research and observations of the many individuals and organizations that contribute information to the program. Please keep in mind that the absence of information for an area does not mean the absence of significant biological features, since no surveys may have been conducted there. Reports produced by the Montana Natural Heritage Program summarize information documented in our databases at the time of a request. These reports are not intended as a final statement on the elements or areas being considered, nor are they a substitute for on-site surveys, which may be required for environmental assessments.

As a user of MTNHP, your contributions of data are essential to maintaining the accuracy of our databases. New or updated location information for all species of concern is always welcome.

We encourage you to visit our website at <http://mtnhp.org>. On-line tools include species lists, an electronic version of *Montana Bird Distribution*, and *Montana Rare Plant and Animal Field Guides*, which contain photos, illustrations, and supporting information on Montana's species of concern. Additional data are available on most species and ecological areas identified in our reports.

If you have questions or need further assistance, please contact us either by phone at (406/444-5354), e-mail (mtnhp@mt.gov) or at the mailing address above.

Natural Heritage Rank Definitions

- G1/S1** At high risk because of extremely limited and/or rapidly declining numbers, range, and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.
- G2/S2** At risk because of very limited and/or declining numbers, range, and/or habitat, making it vulnerable to global extinction or extirpation in the state.
- G3/S3** Potentially at risk because of limited and/or declining numbers, range, and/or habitat, even though it may be abundant in some areas.
- G4/S4** Uncommon but not rare (although it may be rare in parts of its range), and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern.
- G5/S5** Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range.
- GU/SU** Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
- GH/SH** Historically occurred; may be rediscovered.
- GX / SX** Believed to be extinct; historical records only.

Other codes and rank modifiers:

- B/N** State rank modifiers indicating the breeding status for a migratory species; B = Breeding, N = Non-breeding.
- HYB** A global rank denoting a hybrid.
- M** A state rank modifier indicating migratory stopover status for a species.
- Q** A global rank modifier indicating that there are taxonomic questions or problems.
- T** Denotes the rank for a subspecific taxon (subspecies or population); appended to the global rank for the full species. The S Rank following applies to the subspecific taxon.
- S** Denotes inexactness or uncertainty.

Federal Status Designations

Current federal agency status designations are also provided, including legal status under the U.S. Endangered Species Act, and administrative designations of the U.S. Forest Service and Bureau of Land Management. Where the ESA listing status has changed since 2003, the new status is bolded and underlined.

U.S. Fish and Wildlife Service

This value indicates status under the federal Endangered Species Act of 1973 based on categories defined by the U.S. Fish and Wildlife Service (16 U.S.C.A. §1531-1543 (Supp. 1996)).

- E** Listed Endangered
- T** Listed Threatened
- PE** Proposed Endangered
- PT** Proposed Threatened
- XN** Experimental Nonessential
- C** Candidate (species for which the U.S. Fish and Wildlife Service has sufficient information on biological status and threats to propose listing as threatened or endangered)

U.S. FOREST SERVICE

The U.S. Forest Service Manual (2670.22) defines the status of Sensitive species on Forest Service lands. The Regional Forester (Northern Region) designates Sensitive species on National Forests in Montana. This designation applies only on USFS-administered lands.

- S** Sensitive; animal and plant species identified by the Regional Forester for which population viability is a concern as evidenced by significant downward trend in population or a significant downward trend in habitat capacity.

U.S. BUREAU OF LAND MANAGEMENT

The BLM 6840 Manual defines the status of species on Bureau of Land Management lands. They apply only on BLM-administered lands.

- S** Sensitive; species that are proven imperiled in at least part of their ranges and are documented to occur on BLM lands.



Species of Concern Data Report

Monday, August 21, 2006

Visit <http://mtnhp.org> for additional information.

Oncorhynchus clarkii bouvieri

Element Occurrence Map Label: 19372

Element Subnational ID: 13026

EO Number: 27808

Common Name: Yellowstone Cutthroat Trout

Species of Concern (Y) / Potential Concern (W): Y

First Observation Date:

Description: Vertebrate Animal

Last Observation Date:

Natural Heritage Ranks:

Federal Agency Status:

State: S2

U.S. Fish & Wildlife Service:

Global: G4T2

U.S. Forest Service: SENSITIVE

U.S. Bureau of Land Management: SENSITIVE

EO Rank:

EO Data

Numenius americanus

Element Occurrence Map Label: 14713

Element Subnational ID: 11120

EO Number: 91492

Common Name: Long-billed Curlew

Species of Concern (Y) / Potential Concern (W): Y

First Observation Date:

Description: Vertebrate Animal

Last Observation Date:

Natural Heritage Ranks:

Federal Agency Status:

State: S2B

U.S. Fish & Wildlife Service:

Global: G5

U.S. Forest Service:

U.S. Bureau of Land Management: SENSITIVE

EO Rank:

EO Data

Montana Species of Concern US Highway 89 Bridge over the Yellowstone River

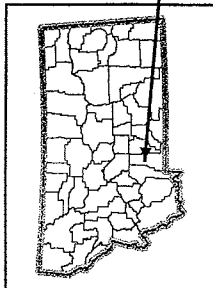
Species of Concern

- Vascular Plant
- Nonvascular Plant
- Other Botanical
- Vertebrate Animal
- Invertebrate Animal
- Other Zoological
- Animal Inferred Extent
- Ecological Sites

SPECIES OF CONCERN: A species is considered only what is known from direct observation with a defined level of certainty regarding the spatial location of the feature.

INFERRED EXTENT: Areas that can be inferred to be probable occupied habitat based on the spatial location of the direct observations of a species and the known or inferred distribution of the species and the range size of the species.

SITES: Ecological information that may be useful in assessing biological values and intergrading species of concern data.



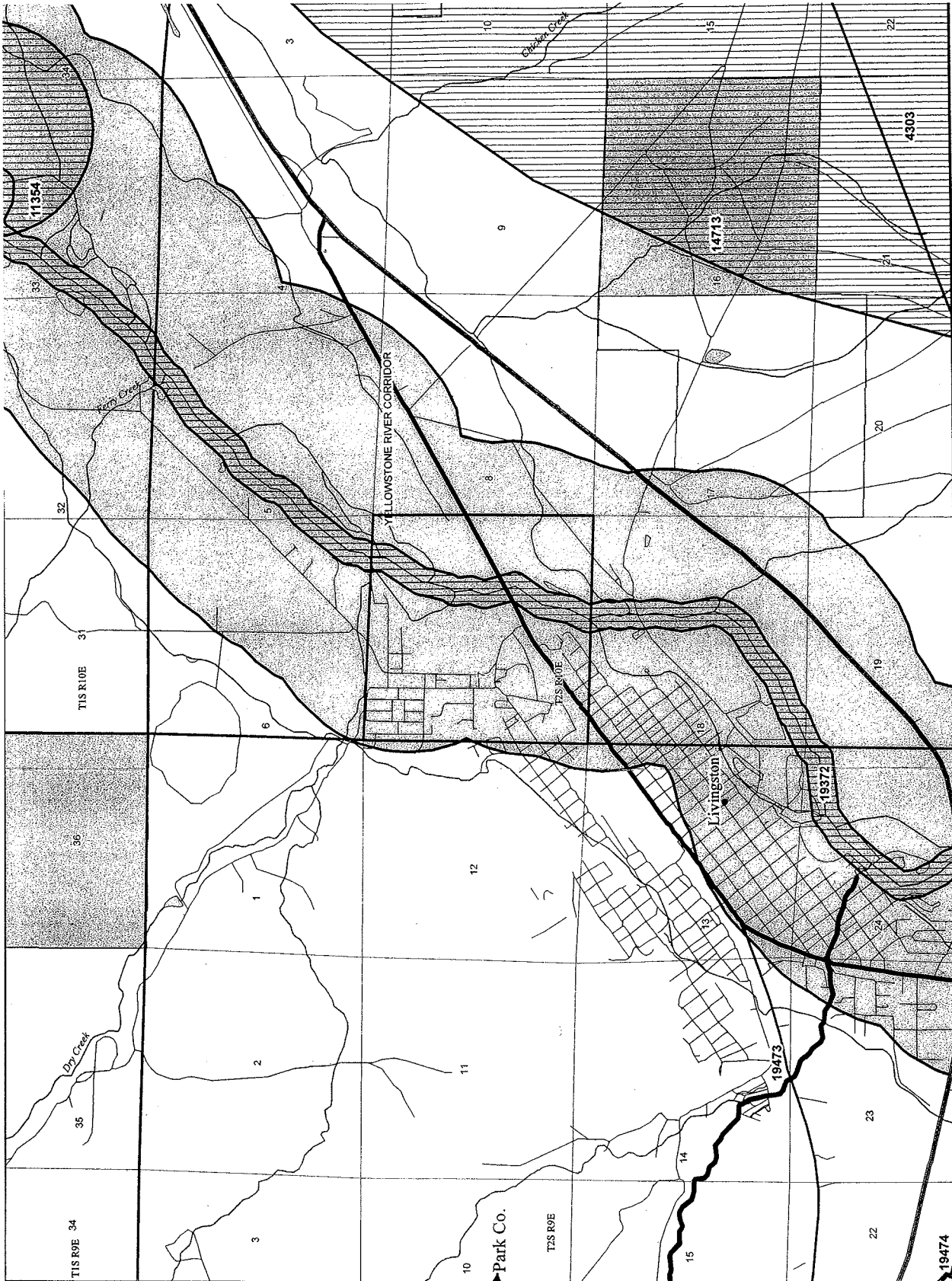
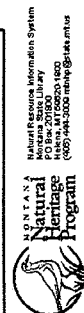
Land Management

- US Bureau of Land Management
- US Bureau of Reclamation
- US Fish and Wildlife Service
- National Park Service
- US Forest Service
- Other USDA
- Army Corps of Engineers
- Other Department of Defense
- Undifferentiated state
- DNRC (state trust lands)
- Montana Fish, Wildlife & Parks
- University, Institutions, MDT
- DNRC (water project lands)
- Local Government
- Bureau of Indian Affairs Trust
- Tribal Lands
- Plum Creek
- Private Land Trusts

Not all legend items may occur on the map.

Features shown on this map do not imply public access to any lands.

This map displays management status, which may vary from ownership.





Ecological Information

YELLOWSTONE RIVER CORRIDOR

The geographic scope of your data search intersected an area for which the Natural Heritage Program databases have ecological information. Such information can be useful in assessing biological values and interpreting Species of Concern data. A summary is provided below of conditions at the time of site record creation.

YELLOWSTONE RIVER CORRIDOR

General Description

This Yellowstone River Corridor is located along the Yellowstone River in south central Montana. This area has a rich diversity of aquatic, riverine, wetland and adjacent upland habitats along the main-stem of the Yellowstone River from the Wyoming border to the confluence with the Bighorn River. Unlike most major rivers in the west, the Yellowstone River is free from major impoundments that have dramatically altered the hydrologic regime. The Yellowstone is characterized as a relatively free-flowing river. The intact hydrology and river dynamics give rise to important cottonwood floodplain communities. The aquatic environments include both cold water and warm water species. Adjacent uplands (within the 1 kilometer buffer) include benches, slopes, cliffs, rock outcrops and historic river-bottom that support shrublands of sagebrush (all three subspecies of *Artemisia tridentata*), grasslands consisting of bluebunch wheatgrass, and woodlands of primarily ponderosa pine (*Pinus ponderosa*).

Biological Significance

The Yellowstone River Corridor contains a diverse environment. In the headwaters near the Wyoming border, the river corridor includes habitat for grizzly bear (*Ursus arctos horribilis*), Canada lynx (*Lynx canadensis*), and gray wolf (*Canis lupus*). Cold water aquatic environments support Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*). Downstream warm water aquatic species include pallid sturgeon (*Scaphirhynchus albus*), paddlefish (*Polyodon spathula*), blue sucker (*Cypleptus elongatus*), the sicklefin chub (*Hybopsis meeki*) and sturgeon chub (*Macrhybopsis gelida*). River and floodplain habitats are very important ecologically; three species of cottonwoods, narrowleaf cottonwood (*Populus angustifolia*), black cottonwood (*Populus balsamifera* spp. *trichocarpa*) and plains cottonwood (*Populus deltoides*) occur in gallery forests and terraces and provide habitat for nesting, wintering and migrating bald eagle (*Haliaeetus leucocephalus*) and rookery sites for blue heron. Channel gravel and sandbars provide habitat for spiny softshell (*Trionyx spiniferus*) and persistent-sepal yellowcress (*Rorippa calcyina*), although this species has not been relocated in recent years. Riparian communities include the state significant plants beaked spikerush (*Eleocharis rostellata*) and Schweinitz's flatsedge (*Cyperus schweinitzii*). Notable shorebirds recorded from this stretch include the Interior Least Tern (*Sterna antillarum athalassos*). Two reptiles, the western hognose snake (*Heterodon nasicus*) and milk snake (*Lampropeltis triangulum*) have been reported from the river corridor.

Key Ecological Factors

Seasonal flooding is the principal process facilitating the establishment and regeneration of cottonwood forests and riparian communities. Consequently, the process of seasonal flooding has direct implications to the numerous plant and animal species occurring within the river corridor.

Exotic Species

There are infestations of numerous exotic plant species and populations of exotic fish species. Non-native salmonid species compete and / or hybridize with the Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*).

Other Values

The Yellowstone river is a relatively free flowing river, restricted only by the occasional riprap along the banks and numerous irrigation diversions and pumping stations. This area captures nesting and foraging habitats of a plethora of species associated with the river and it's floodplain.

Management Information

Agriculture, rural and urban developments and subsequent bank stabilization activities take place along the corridor. Diversions and dams for irrigation canals exits along the main stem and tributaries of the upper Yellowstone River. Irrigation is the major water use. Both irrigation and municipal use of groundwater has increased since 1970, with over 7,000 new wells have been drilled within 5 miles of either side of the bank along the upper Yellowstone River in Montana (MT Bureau of Mines and Geology Wells database).



Natural Resource Information System
Montana State Library
PO Box 201900
Helena, MT 59620-1800
(406) 444-3009 mtnhp@state.mt.us

Natural Heritage Data Report

Monday, August 21, 2006

Visit <http://mtnhp.org> for additional information.

Ecological Information

YELLOWSTONE RIVER CORRIDOR

Information Gaps

An assessment of the health, population structure and age of cottonwoods along islands in the main channel would quantify the dynamics of cottonwood and channel bar establishment.

References

More detailed data on vegetation communities in this area may be available; if you are interested, contact Greg Kudray at (406) 444-0915 or gkudray@mt.gov



Montana Fish, Wildlife & Parks

Box 1414
Livingston, MT 59047

FILE COPY

September 19, 2003

Ms. Laura Hunter
Environmental Planner
David Evans and Associates, Incorporated
1331 17th Street, Suite 900
Denver, Co 80202

REC'D SEP 23 2003

Dear Ms. Hunter,

3/24/03
I am writing on behalf of the Montana Department of Fish, Wildlife & Parks (FWP) in response to your invitation for FWP to be a Cooperating Agency as you develop your proposal to build a new bridge over the Yellowstone River. This bridge is located immediately North East of the town of Livingston, Montana, referenced by you as project number BR 11-1(44)56 CN 4790. As the local fisheries biologist, I have also been assigned to address your information requests.

Apparently I missed your initial correspondence dated March 24, 2003. I first learned about your information requests this week, in your Follow Up letter addressed to Pat Flowers, dated September 4, 2003. Please know that delay in responding to your information requests was unintended, the result of an internal miscommunication for which we take full responsibility. FWP will gladly participate in this project as a Cooperating Agency.

You ask for information in two places enumerated in your letter dated March 24, 2003, and four places enumerated in your letter dated September 4, 2003. Questions in your more recent letter seem to incorporate the earlier information request. Therefore, please find my responses to your more recent information requests, numbered and restated below:

- 1) *Has the MDFW&P acquired or does it plan to acquire lands that may be affected by the project? If so, please indicate whether these lands or any other lands not owned by MDFW&P may have present or planned usage as defined by Section 4(f) of the 1966 Department of Transportation Act (49 U.S.C. 303). These include lands that are part of a publicly-owned significant national, state or local park, wildlife refuge, or recreation area.*

FWP owns a fishing access site known as Mayor's Landing located about 500 yards upstream from the bridge project site. We assume that safety concerns during actual construction of the new bridge will interfere with recreational use of the river in this area by precluding public-access boat launches at Mayor's Landing. The next public access

below Mayor's landing is located near the U.S. Highway 89 North bridge over the Yellowstone River, approximately four miles downstream from Mayor's Landing.

FWP has discussed but not formalized in any way the purchase of land immediately across from the Mayor's Landing Fishing Access Site, on the east bank of the river immediately upstream and adjoining your project site. If purchased, this land would be managed for public recreational use. I believe therefore that this land potentially has a planned usage that falls within definitions of the 1966 Department of Transportation Act. Please note that I am not an attorney. You may wish to consult your own legal staff regarding this issue in light of the potential for newly acquired land in the project area to be purchased and dedicated to public recreational use.

2) Have any lands in the project vicinity been purchased, and/or administered for recreational purposes under Section 6(f) of the National Land & Water Conservation Act (16 U.S.C. 460)

To my knowledge, Mayor's Landing Fishing Access Site is the only land administered by FWP in the project area. As far as I could determine, LWCF funds were not used to purchase the site, nor have they ever been used for its administration.

3) Is there fisheries habitat in the vicinity of the proposed project? Answer: Yes.

If so, please provide the following information:

a) Any comments concerning potential impacts from the proposed project on fisheries habitat in the watercourses in this vicinity.

A new bridge is not likely to have long term negative consequences for fish habitat in the project area. Our main concern is localized disturbances during construction. We anticipate that your construction plans will include actions to reduce or mitigate sediment delivery, and to prevent discharges of petroleum products or other harmful substances into the river, or to adjacent lands capable of delivering these substances to the waterway.

b) Where stream crossings will be impacted by the project, a maximum velocity and minimum water depth allowed for fish passage design.

We assume that the new bridge will not restrict the watercourse of the Yellowstone River to any greater extent than does the existing bridge. For this reason maximum velocities and depth for fish passage should not be an issue. Even if portions of the river's flow need to be temporarily redirected within the existing channel during various construction phases, the remaining flow should be more than adequate to pass fish through the project area. Although it seems highly unlikely that a significant velocity barrier could be established for any significant duration at the project location, pipes, or similar structures used to redirect or control river flow during construction could conceivably create temporary fish passage barriers. These situations should be avoided.

c) *Species of fish present, their average length, and spawning periods.*

Species present:

Common or abundant: Rainbow trout (*Oncorhynchus mykiss*), Brown trout (*Salmo trutta*), Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*), Mountain whitefish (*Prosopium williamsoni*), Mottled sculpin (*Cottus bairdi*), Longnose dace (*Rhinichthys cataractae*), Longnose sucker (*Catostomus catostomus*), and White sucker (*Catostomus commersoni*).

Rare within the project area: Brook trout (*Salvelinus fontinalis*), Common carp (*Cyprinus carpio*), Burbot (*Lota lota*), Goldeye (*Hiodon alosoides*), Sauger (*Stizostedion canadense*), Walleye (*Stizostedion vitreum*)

Average lengths:

Average fish length varies considerably depending on age. All age classes of each species listed as common or abundant are encountered in the project area. Rarely encountered species tend to be adults. Some age and growth analyses of trout and whitefish based on scales are available in FWP reports. If you could tell me how you use this length information in developing your bridge project, I could possibly provide specific values for different fish that would be more helpful to you.

Spawning periods:

For species common in the project area:

Rainbow trout: April into June
Cutthroat trout: May into July
Brown trout: October through December
Mountain whitefish: November into January
Mottled sculpin: May through June
White sucker: April through June
Longnose sucker: May through July
Longnose dace: May through June

It appears unlikely that this portion of the Yellowstone River is a significant spawning area for the rarer species listed above.

4) *Is there wildlife habitat in the vicinity of the proposed project? Answer: Yes.*

If so, please provide any comments concerning potential impacts from the project on wildlife habitat (including wetlands) in this vicinity.

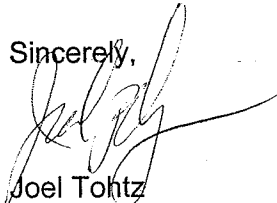
The riparian zones surrounding the project area support many wild species including mammals, birds, reptiles, amphibians, and a large variety of invertebrate animals. Detailing species present would be a considerable undertaking: on an annual basis,

birds alone probably number around 100 different species. Riparian zones of course connect with upland areas supporting their own unique faunal assemblages. For these reasons, minimizing disturbances to existing plant and animal assemblages in the project area should be a priority in your construction planning.

I hope that my comments are useful to you. I expect you will have other questions. Please contact me directly anytime at your convenience. My office phone in Livingston, Montana, is 406-222-5105. My email address is jet@wtp.net.

Thank you again for inviting FWP to participate in this project. We look forward to seeing your environmental assessment, and particular project plans as they develop.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joel Tohtz', with a stylized flourish extending from the end.

Joel Tohtz
FWP Fisheries Biologist

C: Pat Flowers, FWP Region Three Supervisor
Bruce Rich: FWP Region Three Fisheries Manager



U.S. ARMY CORPS OF ENGINEERS

HELENA REGULATORY OFFICE
10 WEST 15TH STREET, SUITE 2200
HELENA, MONTANA 59626

REPLY TO
ATTENTION OF:

July 11, 2003

FILE COPY

Helena Regulatory Office
Phone (406) 441-1375
Fax (406) 441-1380

Subject: Corps File Number 2003-90-211
Yellowstone River - Northeast of Livingston
BR 11-1(44)56, MDT Control Number 4790
Cooperating Agency Response

Ms. Laura Hunter
Environmental Planner
David Evans and Associates, Inc.
1331 17th Street, Suite 900
Denver, Colorado 80202

Dear Ms. Hunter:

This letter is a response to your March 24, 2003 request that the US Army Corps of Engineers (Corps) be a Cooperating Agency for the Montana Department of Transportation (MDT) project listed above. The project is near the east side of Livingston on Park Street, also known as FAP 11, in Section 7, Township 2 South, Range 10 East, Park County, Montana.

Under the authority of Section 404 of the Federal Clean Water Act, Department of the Army permits are required for the discharge of fill material below the ordinary high water mark of our Nation's rivers, streams, lakes or wetlands. Under the authority of Section 10 of the Rivers and Harbors Act of 1899, Department of Army authorization is required for any work on, over, or under any federally listed navigable waters of the United States.

Pursuant to the National Environmental Policy Act, the Corps agrees to be a Cooperating Agency. Our participation as a Cooperating Agency will be limited to reviewing and commenting on project features that will or may affect Waters of the United States as described under Section 10 and Section 404. This will be in addition to our regulatory and permitting responsibilities.

You also requested information regarding any items of concern to the Corps. A preliminary review of the project revealed that the proposed activities would likely require Department of Army permits. This office will provide more specific comments on the project upon receipt of plan sheets and other information that shows the projected fills and other impacts on Waters of the United States. Some general comments are included in the following paragraphs.

REC'D JUL 16 2003

The existing highway bridge is parallel to and immediately upstream of a railroad bridge over the river. For the purpose of the Federal Clean Water and Rivers and Harbors Acts, the new highway bridge over the Yellowstone River should be sized independently of the railroad bridge, i.e., analyzed as if the railroad bridge were not present.

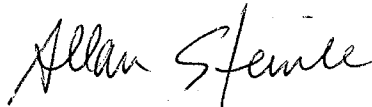
The number of piers required should be kept to the minimum necessary, as piers can be an obstruction to navigation. Any piers that are necessary should be located so that navigation up and downstream is not compromised. The low beam elevation should be kept at least as high as the existing low beam, and it is generally preferable to have six to seven feet of clearance at bankfull flows, which would allow safe boat and floater passage at most times.

Use of riprap or other bank stabilization measures around the end abutments and along the riverbanks must be kept to the minimum necessary. Compensatory mitigation for unavoidable impacts on the Yellowstone River and any adjacent waters of the United States will be required.

Information eventually forwarded to this office must include a delineation of any special aquatic sites in the area, including wetlands and pool-riffle complexes.

Todd Tillinger of this office will be the Corps' project manager. He may be reached by phone at (406) 441-1375 or by e-mail at todd.n.tillinger@usace.army.mil. Please reference Corps File Number 2003-90-211.

Sincerely,



Allan Steinle
Montana Program Manager

Enclosure

Copy Furnished, ✓

Jean Riley, Montana Department of Transportation Environmental Services, Helena



United States Department of the Interior

FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

FILE COPY

M.17 FHWA (I)

June 13, 2003

Laura Hunter
David Evans and Associates, Inc.
1331 17th Street
Suite 900
Denver, Colorado 80202

Dear Ms. Hunter:

This is in response to your March 24, 2003 letter regarding Montana Department of Transportation's (Department) proposal to replace the bridge over the Yellowstone River directly northeast of the city limits of Livingston in Park County, Montana (BR 11-1(44)56; Control No. 4790). Your letter requested information the U.S. Fish and Wildlife Service (Service) may have pertaining to threatened and endangered (T/E) species that may occur in the proposed project area, and was received by the Service's Montana Field Office on March 28, 2003. These comments have been prepared under the authority of, and in accordance with, the provisions of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

In accordance with section 7(c) of the Act, the Service has determined that the following threatened, endangered and proposed species may be present in the project corridor:

Listed Species

bald eagle (*Haliaeetus leucocephalus*); threatened

Expected Occurrence

spring or fall migrant; possible nesting nearby; winter resident

Proposed Species

none

REC'D JUN 16 2003

Section 7(c) of the Act requires that federal agencies proposing major construction activities complete a biological assessment to determine the effects of the proposed actions on listed and proposed species and use the biological assessment to determine whether formal consultation is required. A major construction activity is defined as "a construction project (or other undertaking having similar physical impacts) which is a major federal action significantly affecting the quality of the human environment as referred to in the National Environmental Policy Act (NEPA)" (50 CFR Part 402). If a biological assessment is not required (i.e., all other

actions), the federal agency is still required to review their proposed activities to determine whether listed species may be affected. If such a determination is made, consultation with the Service is required.

For those actions wherein a biological assessment is required, the assessment should be completed within 180 days of initiation. This time frame can be extended by mutual agreement between the federal agency or its designated non-federal representative and the Service. If an assessment is not initiated within 90 days, this list of T/E species should be verified with the Service prior to initiation of the assessment. The biological assessment may be undertaken as part of the federal agency's compliance of section 102 of NEPA and incorporated into the NEPA documents. We recommend that biological assessments include the following:

1. A description of the project.
2. A description of the specific area that may be affected by the action.
3. The current status, habitat use, and behavior of T/E species in the project area.
4. Discussion of the methods used to determine the information in Item 3.
5. An analysis of the affects of the action on listed species and proposed species and their habitats, including an analysis of any cumulative effects.
6. Coordination/mitigation measures that will reduce/eliminate adverse impacts to T/E species.
7. The expected status of T/E species in the future (short and long term) during and after project completion.
8. A determination of "is likely to adversely affect" or "is not likely to adversely affect" for listed species.
9. A determination of "is likely to jeopardize" or "is not likely to jeopardize" for proposed species.
10. Citation of literature and personal contacts used in developing the assessment.

If it is determined that a proposed program or project "is likely to adversely affect" any listed species, formal consultation should be initiated with this office. If it is concluded that the project "is not likely to adversely affect" listed species, the Service should be asked to review the assessment and concur with the determination of no adverse effect.

Pursuant to section 7(a) (4) of the Act, if it is determined that any proposed species may be jeopardized, the federal agency should initiate a conference with the Service to discuss conservation measures for those species. For more information regarding species of concern occurring in the project areas, including proposed and candidate species, please contact the Montana Natural Heritage Program, 1515 East 6th Ave., Helena, 59601, (406) 444-3009.

A federal agency may designate a non-federal representative to conduct informal consultation or prepare biological assessments. However, the ultimate responsibility for Section 7 compliance remains with the federal agency and written notice should be provided to the Service upon such a designation. We recommend that federal agencies provide their non-federal representatives with

proper guidance and oversight during preparation of biological assessments and evaluation of potential impacts to listed species.

Section 7(d) of the Act requires that the federal agency and permit/applicant shall not make any irreversible or irretrievable commitment of resources which would preclude the formulation of reasonable and prudent alternatives until consultation on listed species is completed.

Your letter also requested any comments we may have regarding parks, recreational sites, or wildlife refuges on or adjacent to the project site. Based on the information we have in this office and the map you included with your request, there are no such lands administered by the Service in the immediate vicinity of the proposed project location.

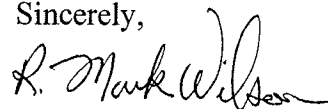
Power lines in the vicinity, if not properly constructed, could pose electrocution hazards for bald eagles. To conserve eagles and other large raptors protected by federal law, we urge that any power lines that need to be modified or reconstructed as a result of these projects be raptor-proofed following the criteria and techniques similar to those outlined in the publication, "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996." A copy may be obtained from: Jim Fitzpatrick, Treasurer, Carpenter Nature Center, 12805 St. Croix Trail South, Hastings, MN 55033. The use of such techniques would likely be most beneficial adjacent to expected raptor foraging areas (i.e., stream crossings or wetlands that support populations of waterfowl).

Bridges that do not allow for inevitable migration of the stream channel will require extensive erosion control in the foreseeable future. These increased bank stabilization activities, including riprap, have both indirect and direct cumulative impacts that significantly affect the physical, chemical and biological dynamics of the stream and its associated aquatic resources. As cumulative effects to these resources increase, the option to riprap and stabilize stream channels upstream of bridges may no longer be viable. The Service recommends that the design of stream crossings include an analysis of cumulative indirect and direct impacts including calculation of bedload dynamics and future bridge maintenance activities and the consideration of additional bridge length as a means of ameliorating these impacts. As mentioned in information accompanying your letter, the Service supports the Governor's Upper Yellowstone River Task Force and strongly urges the Department to implement feasible and applicable recommendations made by the Task Force during the design and construction of this proposed project.

Your letter does not mention whether wetlands might be impacted by the proposed bridge replacement project. If so, Corps of Engineers (Corps) Section 404 permits may eventually be required. In that event, depending on permit type and other factors, the Service may be required to review permit applications and will recommend any protection or mitigation measures to the Corps as may appear reasonable and prudent based on the information available at that time.

If you have questions regarding this letter, please contact Mr. Scott Jackson at the address above or by phone at (406) 449-5225, ext. 201.

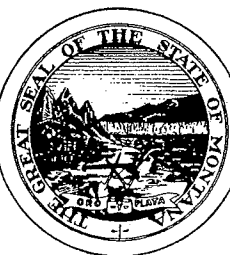
Sincerely,

A handwritten signature in black ink that reads "R. Mark Wilson". The signature is written in a cursive style with a large, stylized "W" and a long horizontal stroke at the end.

R. Mark Wilson
Field Supervisor

DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION
BOZEMAN UNIT OFFICE

FILE COPY



JUDY MARTZ, GOVERNOR

STATE OF MONTANA

(406) 586-5243
FAX: (406) 587-9726

151 EVERGREEN - SUITE C
BOZEMAN, MONTANA 59715-2487

Bozeman Unit
151 Evergreen, Suite C
Bozeman, MT 59715

April 23, 2003

David Evans and Associates Inc.
ATTN: Laura Hunter
1331 17th St, Suite 900
Denver, CO 80202

Subject: MDOT Project BR11-1(44)56CN4790
SEC 7, T2S-R10E

Dear Ms. Hunter;

Scott Compton forwarded your letter to me for comments on the above mentioned project.

The State of Montana, through the Equal Footing Doctrine of 1844, claims ownership of the Yellowstone River between the low water marks. Because we have no surface ownership the impacts are expected to be minimal.

1. Although the Yellowstone River is historically significant there are no documented cultural resources.
2. There are no active mineral leases or abandoned or reclaimed mines.
3. DNRC records indicate there is no R/W easement for the existing bridge. Therefore a R/W easement will have to be applied for.
4. There are no merchantable timber stands that will be impacted.
5. Although the public uses the bridge area to access the river there is no legal fishing access site.
6. See above.
7. MDNRC has no proposed projects in the vicinity.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jim Kalitowski".

Jim Kalitowski
Bozeman Unit Manager

REC'D APR 28 2003

REC'D APR 28 2003

City Manager

Steve Golnar

(406) 222-2005 phone

(406) 222-6823 fax

ci.livingston.mt.us

April 22, 2003

Laura Hunter

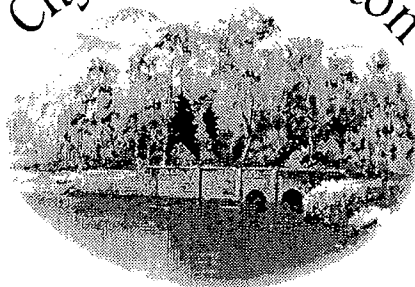
Environmental Planner

David Evans & Associates Inc.

1331 17th Street, Suite 900

Denver, CO 80202

City of Livingston



Incorporated 1889

Chairwoman

Vicki Blakeman

City Commissioners

Sheryl Dahl, Vice Chairwoman

Lenny Gregrey

Thomas Romans

Ed Davis, Sr.

REC'D APR 25 2003

FILE COPY

Re: Yellowstone River – North East Livingston Bridge Comment.

Dear Ms. Hunter:


Thank you for your letter of March 24, 2003 requesting any pertinent information or concerns from the City of Livingston on the upcoming Yellowstone River Bridge project.

City concerns include the following:

- We would like for the bridge plans to include provisions for the extension of 12" water and sewer utility mains across the River in coordination with the bridge development. The City is willing to pay for the cost of this design. Please inform us of what this cost will be.
- We are interested in collaborating with the Montana Department of Transportation and Park County to develop a design that provides safe lane widths for all users, accommodates multi-modal transportation needs and incorporates unique and aesthetic treatment that establishes the bridge as a gateway to our community. Consideration of the concepts from the City's Urban Design Framework Master Plan, which was recently completed, is encouraged.
- The City will need to extend water from near the Sewer Plant and the sewer service from the current Bennett Street Intersection at Park to the Bridge. These Utility extension plans will need to be coordinated with the MDT efforts.
- We understand that the Bennett Street Intersection would also be re-configured as part of this project. We request a pedestrian and bicycle crossing across the railroad tracks and across Park Street be part of the redesign effort. There was some discussion about a possible underpass (tunnel) to go under the railroad tracks at Bennett Street for pedestrian/bicycle transportation. We want to pursue a cooperative project working with the railroad and MDT and City and County CTEP funds to accomplish this.

Thank you for the opportunity to comment. More specific questions relating to Utilities and Public Works related activities can be directed to Mr. Clint Tinsley, Public Works Director, 406-222-1142, or myself at 406-823-6000.

I, Steve Golnar, City Manager, will be the formal contact person for the City for this project.


Steve Golnar
CITY MANAGER

Cc: Livingston City Commission
Clint Tinsley, Public Works Director
Transportation Coordinating Committee

414 East Callender Street Livingston, Montana 59047



United States Department of Agriculture



Natural Resource Conservation Service
Federal Building, Room 443
10 East Babcock Street
Bozeman, Montana 59715-4704

FILE COPY

REC'D APR 7 2003

Subject: ECS-Requested Response David Evans and Associates
Regarding Environmental Concerns Relative to
Improvements to State Primary Route 11/US Hwy 89
Northeast of Livingston City Limits, Park County,
Montana

Date: April 2, 2003

To: Ron Hoagland
District Conservationist
Livingston, Montana

File Code: 190-15-12

Attached please find a copy of the letter and map from the consulting firm of David Evans and Associates, Inc. regarding proposed improvements to the structure crossing the Yellowstone River on State Primary Route 11/ US Highway 89 directly Northeast of the Livingston City Limits, Park County, Montana. David Evans and Associates, Inc. has requested comments regarding potential environmental impacts.

Please prepare a response to David Evans and Associates, Inc. indicating the general presence and extent of Important Farmland within the scope of their proposed State Primary Route 11 project (SEE ATTACHED MAP). It will then be the responsibility of the Montana Department of Transportation (MDOT) to determine if the project is subject to the provisions of the Farmland Protection Policy Act (FPPA). If subject, MDOT or their agent will then be required to submit Form AD-1006 or CPA-106 for formal FPPA evaluation. In general, if project actions are to occur entirely within the existing right-of-way, the land is considered converted and the provisions of FPPA do not apply.

Please provide a carbon copy of your response to the NRCS State Office. If you have any questions regarding this request, please contact Tom Pick, State Water Quality Specialist, at 406.587.6947, thomas.pick@mt.usda.gov.

A handwritten signature in black ink, appearing to read "Tom Pick", is written over a horizontal line.

THOMAS L. PICK
Water Quality Specialist

Enclosure

cc: w/o enclosure

Martin A. Jiminez, State Resource Conservationist, NRCS, Bozeman SO

Dennis Loreth, ASTC-FO, NRCS, Bozeman AO

Laura Hunter, Environmental Planner, David Evans and Associates, Inc., 1331 17th Street, Suite 900, Denver, Colorado 80202.

REC'D APR 2 2003



P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • fax 406.444.0581 • tel 406.444.3009 • <http://nris.state.mt.us>

March 31, 2003

Laura Hunter
David Evans and Associates Inc.
1331 17th Street, Suite 900
Denver, Colorado 80202

Dear Laura,

I am writing in response to your request for information on plant and animal species of concern in the vicinity of the Yellowstone River – NE Livingston, CN 4790, T02S, R10E, Section 7, Park County. We checked our databases for information in this general area and have enclosed 2 species of concern reports, one map and explanatory material.

Please keep in mind the following when using and interpreting the enclosed information and maps:

- (1) These materials are the result of a search of our database for species of concern that occur in an area defined by requested township, range and section with an additional one-mile buffer surrounding the requested area. This is done to provide you with a more inclusive set of records and to capture records that may be immediately adjacent to the requested area.
- (2) In the report, the term "precision" reflects the quality of the location information. S (second) precision is used when the location of the collection/observation is known within a three-second radius (approximately 10 acres); M (minute) precision is used when the location of the collection /observation is known within a one minute radius (approximately 1.5 miles); and G (general) precision is used when the location of the record/collection is known within a 5 mile radius or to a place name only. Some species locations outside the selection area have imprecisely-known locations and may actually occur within the selection area.
- (3) Location information for animals represents occupied breeding habitat; location information for plants represents known occurrences of plant species, and, like animals, has an implied range that may not be fully conveyed by the mapped data. Most locations are depicted as points, but some, especially those that cover large area, are depicted as polygons on the map. The approximate boundaries of these polygons are color-coded to help differentiate vertebrate classes and plants.
- (4) This report may include sensitive data, and is not intended for general distribution, publication or for use outside of your agency. In particular, public release of specific location information may jeopardize the welfare of threatened, endangered, or sensitive species or communities.
- (5) The accompanying map(s) display management status, which may differ from ownership. Also, this report may include data from privately owned lands, and approval by the landowner is advisable if specific location information is considered for distribution. Features shown on this map do not imply public access to any lands.
- (6) Additional biological data for the search area(s) may be available from other sources. We suggest you contact the U.S. Fish and Wildlife Service for any additional information on threatened and endangered species (406-449-5225). Also, significant gaps exist in the Heritage Program's fisheries data, and we suggest you contact the Montana Rivers Information System for information related to your area of interest (406-444-3345).

- (7) The results of a data search by the Montana Natural Heritage Program reflect the current status of our data collection efforts. These results are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys, which may be required for environmental assessments.

We have a new data request system available via the internet. The URL is:

<http://nris.state.mt.us/reqapp/userMain.htm>

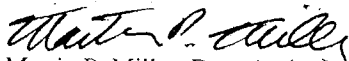
I've assigned your username: lhunt

And password: lhunt213

You may wish to change the password as a security measure.

I hope the enclosed information is helpful to you. Please feel free to contact me at (406)-444-3290 or via my e-mail address, below, should you have any questions or require additional information.

Sincerely,



Martin P. Miller, Data Assistant
Montana Natural Heritage Program
(martinm@state.mt.us)

3/29/2003

Montana Natural Heritage Program
Species of Concern
Yellowstone River - NE Livingston, CN 4790

Scientific Name: HALIAEETUS LEUCOCEPHALUS

Common Name: BALD EAGLE

Forest Service Status: THREATENED

Global Rank: G4

USFWS Endangered Species Act: (PS:LT,PDL)

State Rank: S3B,S3N

BLM Status: SPECIAL STATUS

Occurrence Type:

Species occurrence data:

STATUS: CURRENT. THE MONTANA BALD EAGLE WORKING GROUP (BEWG) ANNUALLY SURVEYS AND COLLECTS DATA ON NEST SITES. CONTACT BEWG COORDINATOR DENNIS FLATH OF MONTANA FISH, WILDLIFE & PARKS (406-994-6354) FOR MORE INFORMATION ABOUT THIS OCCURRENCE.

Last observation: 1999

- Size (acres):

General site description:

Land owner/manager:

BLM: BUTTE FIELD OFFICE; PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

Information source:

FLATH, D. 2000. [MEMO LISTING LOCATION OF BALD EAGLE NESTS AS OF AUGUST, 1999.] UNPUBLISHED REPORT. 11PP.

Survey site name: HEART K

County: PARK

USGS quadrangle: MISSION

Precision: M

Elevation (ft): 4420

Location:

SITE IS ALONG THE YELLOWSTONE RIVER CA. 2.5 AIR MILES NORTHEAST OF LIVINGSTON.

Township\Range:

001S010E

Section:

33

TRS comments:

3/29/2003

Montana Natural Heritage Program
Species of Concern
Yellowstone River - NE Livingston, CN 4790

Scientific Name: ONCORHYNCHUS CLARKI BOUVIERI

Common Name: YELLOWSTONE CUTTHROAT TROUT

Global Rank: G4T2

State Rank: S2

Forest Service Status:

USFWS Endangered Species Act:

BLM Status: SPECIAL STATUS

Occurrence Type:

Species occurrence data:

PROBABLE HABITAT FOR PURE-STRAIN ADULTS THAT BREED IN TRIBUTARY HEADWATERS BUT MIGRATE TO AND FEED IN THESE MAINSTEM SECTIONS.

Last observation:

Size (acres):

General site description:

NONE

Land owner/manager:

PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE); STATE TRUST LAND; BLM: BUTTE FIELD OFFICE; BLM: BILLINGS FIELD OFFICE

Comments:

RAINBOW TROUT AND VARIOUS HYBRIDS ARE PRESENT THROUGHOUT THESE MAINSTEM SECTIONS.

Information source:

TOHTZ, JOEL. MONTANA FISH, WILDLIFE PARKS, LIVINGSTON, MT. 406-222-5109. EMAIL: JET@WTP.NET.

Survey site name: YELLOWSTONE & SHIELDS RIVERS

County: PARK; SWEET GRASS

USGS quadrangle: (EXTENDS OVER MULTIPLE QUADS)

Precision: G

Elevation (ft):

Location:

THE MAINSTEM YELLOWSTONE RIVER FROM YELLOWSTONE NP DOWNSTREAM TO THE MOUTH OF LOWER DEER CREEK (NEAR GREYCLIFF); PLUS THE SHIELDS RIVER UPSTREAM TO SMITH CREEK.

Township\Range:

Section:

TRS comments:

001S010E

26

CENTRUM AT SHIELDS RIVER MOUTH.

Montana Natural Heritage Program

P.O. Box 201800
1515 East Sixth Avenue
Helena, Montana 59620-1800
(406) 444-3009
<http://nris.state.mt.us>

FILE COPY

Explanation of Element Occurrence Reports

Since 1985, the Montana Natural Heritage Program (MTNHP) has been compiling and maintaining an inventory of the elements of biological diversity in Montana. This inventory includes plant species, animal species, plant communities, and other biological features that are rare, endemic, disjunct, threatened or endangered throughout their range in Montana, vulnerable to extirpation from Montana, or in need of further research.

Individual species, communities, or biological features are referred to as "elements." An "element occurrence" generally falls in one of the following categories:

Plants: A documented location of a plant population. In some instances, adjacent, spatially separated clusters are considered subpopulations and are grouped as one occurrence (e.g., the subpopulations occur in ecologically similar habitats, and are within approximately one air mile of one another).

Animals with limited mobility (most invertebrates, amphibians, reptiles, small mammals, most fish): The location of a specimen collection or of a verified sighting; assumed to represent a breeding population. Additional collections or sightings are often appended to the original record.

Mobile or migratory animals (most birds and larger mammals, some fish): Breeding areas (including nesting territories, dens and leks) and significant aggregation sites (winter feeding areas, staging grounds, or hibernacula).

Communities: All contiguous, high-quality habitat as defined by physical and biological features.

Other: Significant biological features not included in the above categories, such as bird rookeries, peatlands, or state champion trees.



The quantity and quality of data contained in MTNHP reports is dependent on the research and observations of the many individuals and organizations who contribute information to the program.

Please keep in mind that the absence of information for an area does not mean the absence of significant biological features. Reports produced by the Montana Natural Heritage Program summarize information known to the program at the time of a request. These reports are not intended as a final statement on the elements or areas being considered, nor are they a substitute for on-site surveys which may be required for environmental assessments.

As a user of MTNHP, your contributions of data are essential to maintaining the accuracy of our data bases. New or updated location information for all species of special concern is always welcome.

We encourage you to visit our website at <http://nris.state.mt.us/mtnhp/>. On-line tools include species lists, an electronic version of *Montana Bird Distribution*, and search capabilities by county, management unit, or USGS 7.5' quadrangle. Also available is the *Montana Rare Plant Field Guide*, which contains photos, high-quality diagnostic illustrations, and supporting information for over 300 rare plant species in Montana.

Certain codes and abbreviations are used in element occurrence reports. Although many of these are very straightforward, the following explanations should answer most questions.

Global Rank and State Rank

Taxa are evaluated and ranked by MTNHP on the basis of their global (range-wide) status, and their state-wide status according to a standardized procedure.

For each level of distribution, global and state, species are assigned a numeric rank ranging from 1 (critically imperiled) to 5 (demonstrably secure). For example, Clustered lady's-slipper (*Cypripedium fasciculatum*) is ranked G4 S2. That is, globally the species is apparently secure, while in Montana it is imperiled because of rarity, or because of other factors making it demonstrably vulnerable to extirpation.

Rank Definition

- 1 Critically imperiled because of extreme rarity, or because of some factor of its biology making it especially vulnerable to extirpation.
- 2 Imperiled because of rarity, or because of other factors demonstrably making it very vulnerable to extinction throughout its range.
- 3 Vulnerable because of rarity, or found in a restricted range even though it may be abundant at some of its locations.
- 4 Apparently secure, though it may be quite rare in parts of its range, especially at the periphery.
- 5 Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery.
- U Possibly in peril but status uncertain; more information needed.
- H Historical, known only from records over 50 years ago; may be rediscovered.
- X Believed to be extinct; historical records only.

Other Global and State Rank codes:

- T Rank for a subspecies or variety; appended to the global rank for the full species, e.g., G4T3.
- Q Taxonomic questions or problems involved; more information needed.
- ? Inexact or uncertain.
- Z Ranking not applicable.
- A Accidental in the state. Includes species (usually birds or butterflies) recorded very infrequently, hundreds or thousands of miles outside their usual range.
- B A state rank modifier indicating breeding status for a migratory species. Example: S1B, SZN = breeding occurrences for the species are ranked S1 (critically imperiled) in the state; non-breeding occurrences are not ranked in the state.
- # A modifier to SX or SH: the species has been reintroduced but the population is not yet established.

U. S. Fish And Wildlife Service Endangered Species Act Status

Abbreviations indicate the categories defined in the U.S. Fish and Wildlife Service Notice of Review and indicate the status of a taxon under the federal Endangered Species Act of 1973 (16 U.S.C.A. §1531-1543 (Supp. 1996)).

Note: the categories C2, 3B and 3C are no longer maintained by the U.S. Fish and Wildlife Service (61 FR 7596, Feb. 28, 1996).

Current categories are:

- LE listed endangered
- LT listed threatened
- PE proposed endangered
- PT proposed threatened
- C candidate: Substantial information exists in U.S. Fish and Wildlife files on biological vulnerability to support

proposals to list as threatened or endangered.

NL not listed or no designation (see below)

XN non-essential experimental population

A species can have more than one federal designation if the species' status varies within its range. In these instances, the Montana designation is listed first. Example: LE^{LT} = species is listed as endangered in Montana; elsewhere in its range it is listed as threatened.

U.S. Forest Service Status

The status of species on Forest Service lands as defined by the U.S. Forest Service manual (2670.22). These taxa are listed as such by the Regional Forester (Northern Region) on National Forests in Montana. Species are listed as:

T/E/P listed as Threatened (LT) or Endangered (LE) under the Endangered Species Act or proposed for listing (P), and known or suspected to occur on national forests.

S sensitive species, subspecies or variety, for which the Regional Forester has determined there is a concern for population viability rangewide or in the region.

Bureau of Land Management Status

The status of species on Bureau of Land Management land is defined by the BLM 6840 manual and designated by the Montana State Office of the BLM in 1996:

S sensitive species: proven to be imperiled in at least part of its range and documented to occur on BLM lands.

W watch species: either known to be imperiled and suspected to occur on BLM lands, suspected to be imperiled and documented on BLM lands, or needing further study for other reasons.

Other terms that may be used in this report

USGS quadrangle – Name of the 7.5-minute USGS topographic map(s) where the population is located.

Township, range, section, TRS comments - legal description of the centroid of the population and, if known, additional townships or sections. TRS locators may be based on unsurveyed townships; in such cases, the locators are derived from U. S. Forest Service visitor maps or from BLM surface management status maps. This is done for convenience in describing species locations; the information does not necessarily indicate legal boundaries.

Precision – the level of location accuracy of the record.

S = accuracy of location is within an area of approximately 10 acres

M = accuracy of location is within a radius of approximately 1.5 miles

G = location is a place-name only, or within a radius of approximately 5 square miles.

Last observation: date the element was last observed extant at the site (not necessarily the date the site was last visited).

Land Owner/manager – the ownership or management of the land on which the element occurs. Areas are generally listed from smallest to largest. In most instances, this information is derived from U.S. Forest Service visitor maps or from BLM surface management status maps.

Please remember that this report is a summary of information. Additional data are available on most sites and species

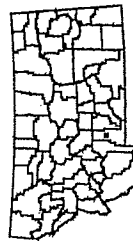
If you have questions or need further assistance, please contact us either by phone at (406/444-0914), e-mail (mtnhp@nris.state.mt.us) or at the mailing address shown on the first page.

Montana Species of Concern Yellowstone R.-NE Livingston CN 4790

Biological Data
 ▲ Animal
 ● Plant
 ○ Other
 ⊕ (Fish, Birds, &/or Herps)Fluvial Occurrences
 Search Area

Land Status

BLM
 BOR (BuRec)
 CoE & other DoD
 NPS
 USFS
 Other USDA
 USFWS
 BIA Trust
 Tribal
 State Trust
 DFWP
 University & Institutions
 County & City
 Plum Creek
 Private Conservation
 Other private
 Water



Species locations depicted outside the search area have imprecisely known locations and may actually occur within the search area.

Not all legend items may occur on map.

Features shown on this map do not imply public access to any lands.

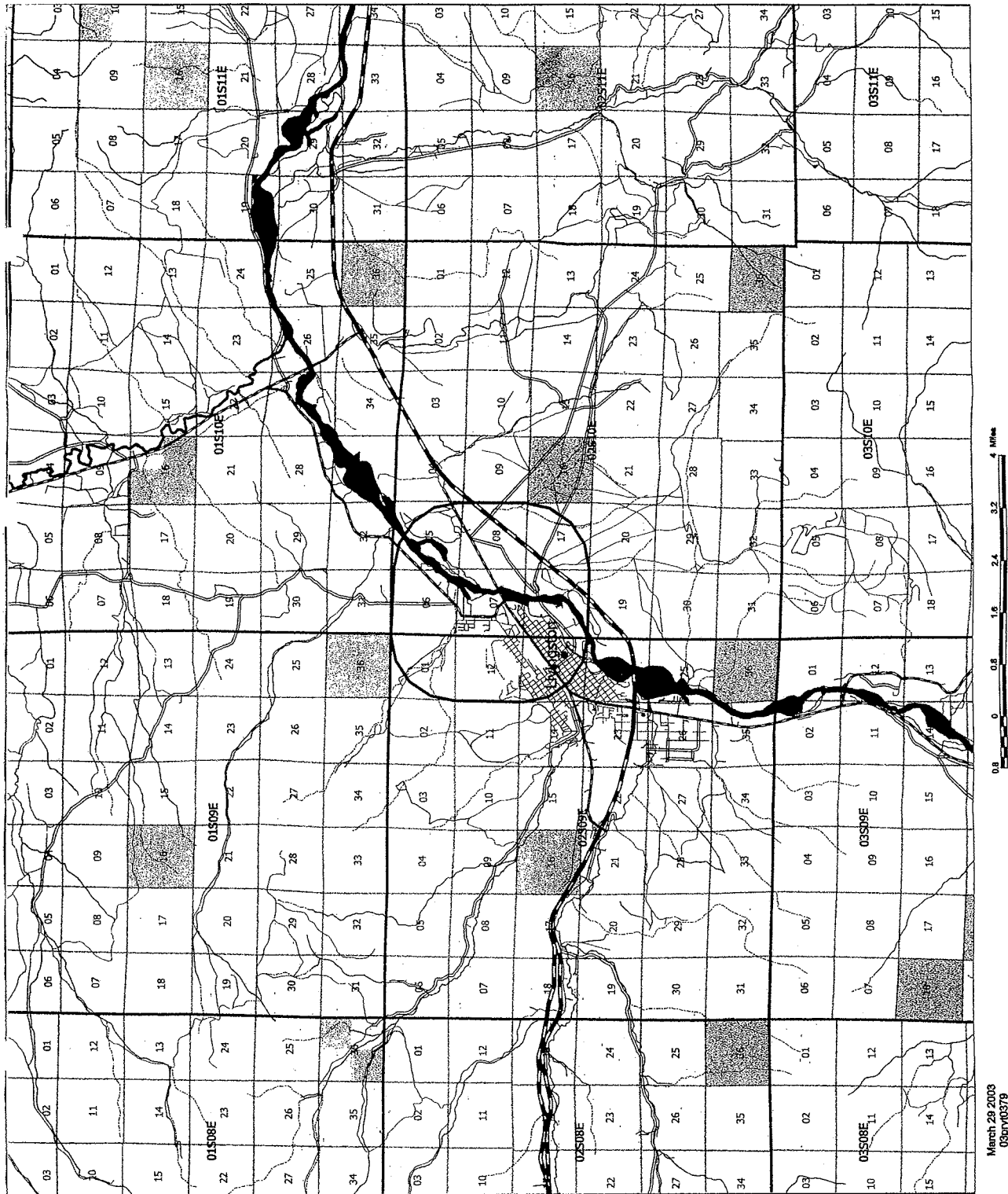
This map displays management status, which may differ from ownership.

Refer to accompanying documentation for full explanation of map features.



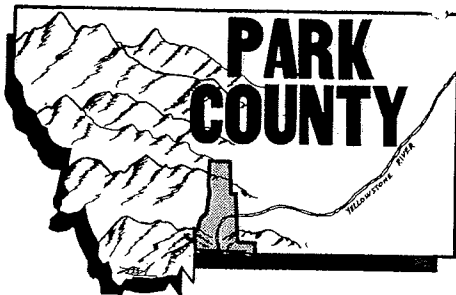
Montana Natural Heritage Program
 Natural Resource Information System
 PO Box 201600
 Helena, MT 59620-1600
 (406) 443-0000 mnhp@state.mt.us

March 29 2003
 03prv0379



REC'D MAR 31 2003

FILE COPY



PARK COUNTY COMMISSIONERS

414 E. Callender, Livingston, MT 59047 • Ph. 406-222-4106, Fax 406-222-4199

March 27, 2003

David Evans and Associates Inc.
1331 17th Street, Suite 900
Denver, MT 80202

RE: BR 11-1(44)56 CN 4790
Yellowstone River - NE Livingston
Cooperating Agency Request

Dear Associates:

This letter is to confirm your request that Park County be a Cooperating Agency on the proposed project in accordance with the U.S. Department of Transportation Federal Highway Administration's regulations.

Park County looks forward to receiving the copy of the draft environmental document on this proposed project. If we can be of any help, please contact us at the address above.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ed Schilling".

Ed Schilling, Chairman

A handwritten signature in cursive script, appearing to read "Ed Carrell".

Ed Carrell

A handwritten signature in cursive script, appearing to read "James R. Durgan".

James R. Durgan

Appendix G Public Involvement Materials

PUBLIC MEETING

Participate.

The Montana Department of Transportation invites you to participate in an open house style public meeting for the Yellowstone River Bridge ("KPRK bridge") project.

The open house will be a hands-on meeting, in which the project team and citizens will sit down together to identify and discuss issues and concerns about the Yellowstone River Bridge, which is located on Highway 89, just northeast of Livingston.

The meeting will be at 7pm, Tuesday, December 16, 2003, at the City/ County Complex, Community Room, 414 East Callender Street, in Livingston, Montana.

At 7:15pm there will be a brief presentation to introduce the project. The remainder of the meeting will afford you the chance to speak with MDT project team members about your concerns and expectations for the project.

Your comments and concerns are a very important part of the process. We invite you to attend to voice suggestions and present pertinent information about the project. To arrange special accommodations for disabilities call MDT at (406) 494-9600. For TTY call (406) 444-7696 or (800) 335-7592.

**7pm, Tuesday, December 16,
2003**

**City/County Complex
Community Room
414 East Callender Street
Livingston, Montana**



Yellowstone River Bridge Replacement Environmental Assessment

OPEN HOUSE AND PUBLIC MEETING

When: Tuesday, December 16th 7:00 - 9:00 PM
Open House Presentation at 7:15 PM

Where: City/County Complex (Community Room)
414 E. Callender Street in Livingston

Why: The Montana Department of Transportation (MDT) requests your input on this bridge replacement project.

This open house is the beginning of the process to design a replacement of the Yellowstone River Bridge northeast of Livingston, near the KPRK radio station.

There will be a brief presentation to introduce the project. The remainder of the meeting will provide you an opportunity to speak with the MDT project team members about your concerns and expectations for the project.

For more information contact:

Jeff Ebert at 406-494-9600

MDT Butte District Administrator



MDT Butte District
PO Box 3068
Butte, MT 59702-3068

To make special accommodations
for persons with disabilities, call
(406) 444-7696 or
TTY (800) 335-7592.



**Yellowstone River Bridge Replacement
Environmental Assessment**

**OPEN HOUSE AND
PUBLIC MEETING**

Tuesday, December 16th 7:00 - 9:00 PM

Open House Presentation at 7:15 PM

**City/County Complex (Community Room)
414 E. Callender Street in Livingston**

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For more information contact:

Jeff Ebert at 406-494-9600

MDT Butte District Administrator

